

61 MINUTES OF VIDEO

Future

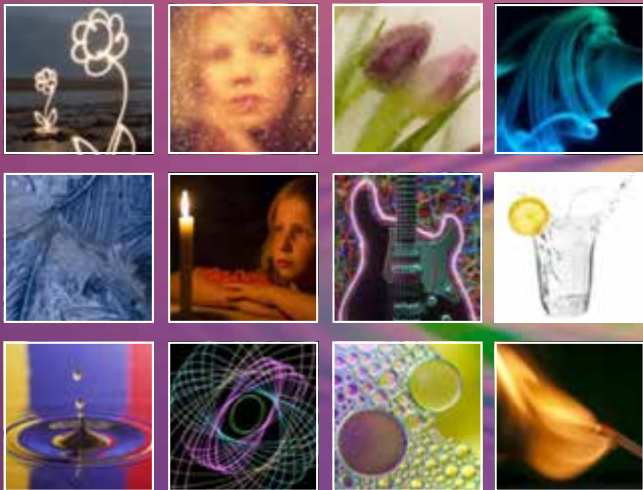
Digital Camera World

The definitive guide to SLR & CSC photography



AMAZING CREATIVE PROJECTS

12 fantastic photo effects to shoot at home this weekend!



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ISSUE

● TIPS CARDS TO PRINT OUT AND KEEP



"The new background replacement feature on v17 is amazing"
Cameracraft Mag Test



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already a firm favourite. Highly recommended"*
Prof Imagemaker Mag Test

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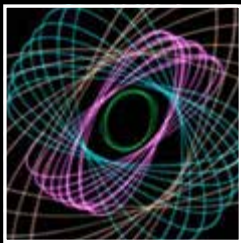
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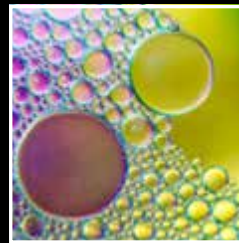
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Editor Ben Brain, two readers and a nature guide don their deer-stalking kit and take a walk on the wild side to photograph the stunning animals of Exmoor National Park



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INTERVIEW BRENT STIRTON

Wildlife Photographer of the Year 2017 overall winner, photojournalist and Canon ambassador Brent tells us about patience, diplomacy and a wide-angle view



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GROUP TEST BEST BEGINNER CAMERA

DSLR or CSC? Canon, Nikon or another manufacturer? Our in-depth group test finds out which is the best camera right now for photography newcomers

Welcome to the December 2017 issue of Digital Camera

THE clocks have gone back, and the days are now well and truly short, dark and chilly. Winter is here! This is, of course no reason to

hang up your cameras. If you're brave enough to head for the hills, the winter landscape opportunities can be fabulous... And you don't have to get up at some ungodly hour to catch the rising sun either. If you're worried by wonky horizons in your landscapes, you'll have noticed a rather snazzy hotshoe spirit level in this month's package [UK readers only]. Turn to page 40 for some tips on how to use it.

If you'd rather keep warm and stick to the comfort of your home for your winter photo antics, then photography whizz Jon Adams has put together a dozen cool creative projects for you.

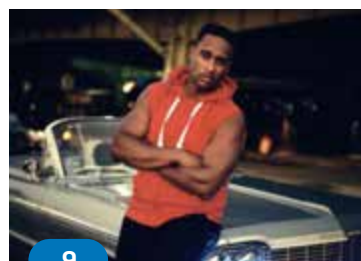
The rest of the magazine is chock-a-block with inspirational images, killer techniques and the world's best kit reviews. And don't forget to enter our Photographer of the Year contest on page 24. Good luck!

Ben

Ben Brain
Editor, Digital Camera



THIS MONTH'S STAR CONTRIBUTORS...



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RPS EXHIBITION

Our gallery comes from the 160th RPS International Exhibition

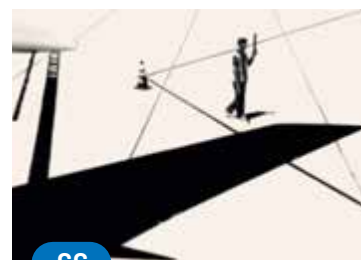


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JON ADAMS

For our cover story, Jon has 12 top ideas inspired by the elements

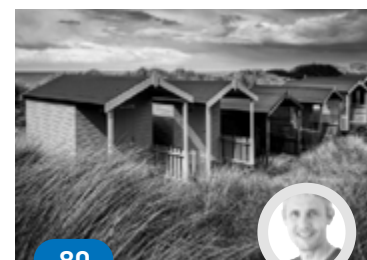


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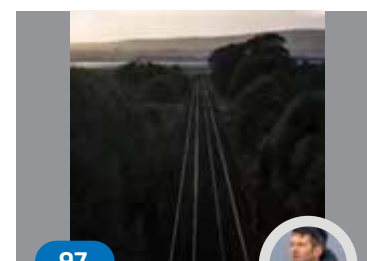


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THE BIG INTERVIEW

BRENT STIRTON

Award-winning photojournalist Brent tells us stories from the field

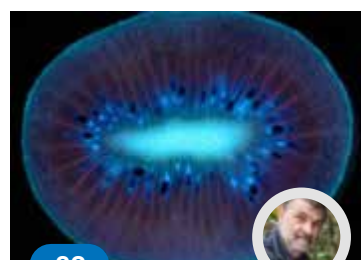


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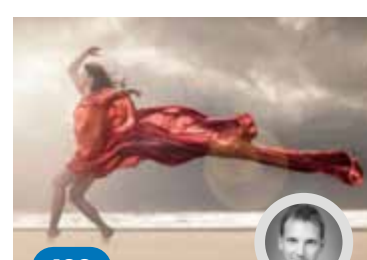


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See page 46

* For new subscribers

Digital Camera FREE GIFTS

EVERY ISSUE WE BRING YOU MORE FREEBIES THAN ANY OTHER PHOTO MAGAZINE!



FREE! 4 photo tips cards

This month, we've got four fresh and exclusive shooting guides for your collection. So pick up quick tips for photographing garden wildlife, autumnal abstracts, firework displays and rainbow coloured cross-polarisation.



162-PAGE BUYERS' GUIDE EBOOK

If you're after some new kit this year, you won't want to miss your free *Camera Shopper* ebook, with the best buying advice around. Look for the PDF in the Gifts folder on the disc supplied with this issue.



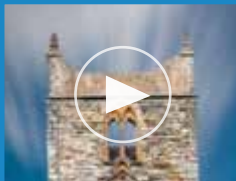
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61 MINUTES OF VIDEO TUTORIALS THIS ISSUE

PHOTOSHOP MASTERCLASS

Simulate the effect of a tripod and ND filter when you create a long-exposure sky to inject extra atmosphere into your building pictures.

SEE PAGE 124



LIGHTROOM SKILLS

Bring your separate panoramic photos into Lightroom and merge them into a raw file you can edit any way you like.

SEE PAGE 130



ARTIST INSIGHT

Keep all your options open as edit your shots, with the ability to change, delete and add to effects without ever reducing image quality.

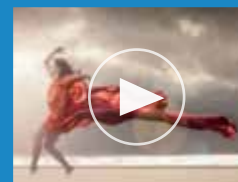
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CREATIVE SPOTLIGHT

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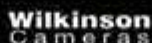
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HOTSHOTS

OUR FAVOURITE PHOTOS FROM THE RPS INTERNATIONAL EXHIBITION 160



SARA CUCÈ — UK

"The series *This Body is No One's Home* explores the sense of not belonging. It's the result of reflections about the disappearing of a personal self, and influenced by the oriental concept of the human body as a home and temple. The images are in-camera double exposures shot using a Cosina CT1-A and Kodak Tri-x film that I've developed and printed in the darkroom."

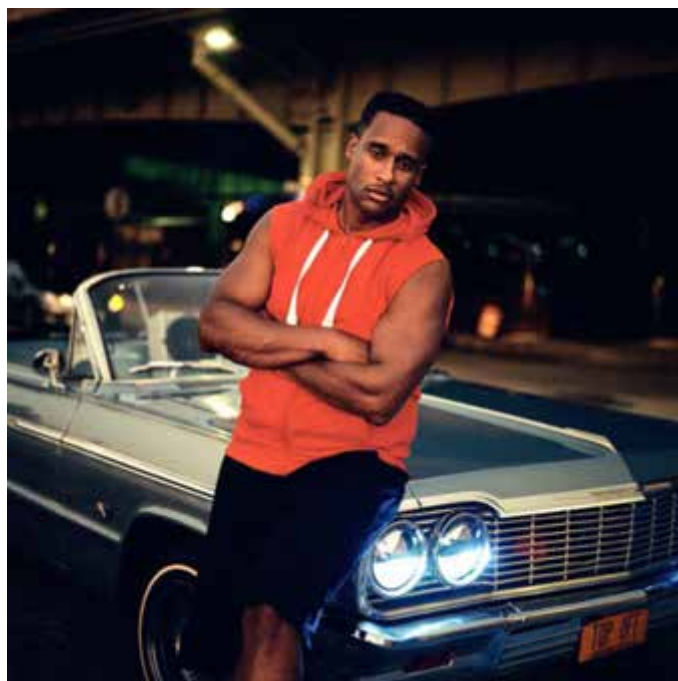
About the RPS International Photography Exhibition

Now in its 160th year, the RPS International Photography Exhibition is the longest running exhibition of its kind in the world. The exhibition travels to photo festivals and traditional gallery spaces, engaging with a wide public audience.

www.rps.org/ipe160



Sanchez, a member of the Lunatics Lowrider Crew.



Sosa, a member of the Lunatics Lowrider Crew.



Lunatic Lowriders. A Cadillac with hydraulic springs balancing on three wheels.



Chevy Impala, Lunatic Lowriders.

OWEN HARVEY — UK GOLD, UNDER 30s

"In the mid-to-late 1940s, a new subculture in America emerged and grew during the post-war prosperity of the 1950s. Young Latino youths were placing sandbags in their custom vehicles so that the body of the cars would ride close to the road; 'slow and low' being their motto. The vehicles were decorated to hold political statements and sported images representing Latino culture – lowriding had begun. As the years passed, lowriding culture became extremely popular and the cars had hydraulic springs installed to perform tricks on the road, such as driving on three wheels, or bouncing the front wheels up to a metre off the ground. Often seen in music videos, the scene was embraced by cultures all around the world and had huge global appeal. For the series *Ground Clearance*, I travelled to America in 2016-17 to document the scene."



Snag. 23rd Street NW, Medicine Hat, AB, Canada, 2015

WES BELL — CANADA BRONZE

“Four years ago, I was leaving for the airport after saying goodbye to my mother. She was dying of cancer. On the long drive across the Alberta prairie, I found myself distracted by flapping remnants of plastic bags, caught in barbed-wire fences that lined the ditches. Whipped violently by the wind, they were left shredded and lacerated, but trapped nonetheless in the no man’s land of boundary fences, neither here nor there. Thinking about mortality, pain and death in the context of my mother’s terminal illness, these forgotten shreds of plastic took on a deeper significance. Snag.”



Leah in the Backcourt, 2016.



Steven, 2017.



Liam, 2017.



Kyla, 2017.

MARGARET MITCHELL — UK GOLD

"In This Place is an ongoing series involving my sister's children and grandchildren. After first photographing them in 1994, we agreed in 2016 to update the images, tracing the story of their present-day lives in their hometown in central Scotland. My sister died in 2008 and this loss deeply affected her family, with repercussions on multiple levels. Each image has its own story, and as a series it covers aspects of family, loss, love and survival set against a wider socio-economic backdrop. Ultimately, the work raises questions on choice – do we have choices in life, or are some predetermined and made for us?"

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KATINKA HERBERT — **UK** Yoasán Guillén, Cuban, Baseball Player, Havana, Cuba 2017

“Yoasán Guillén is centre fielder for Industriales, which is one of two baseball teams based in Havana, Cuba. Industriales is historically the most successful team in the Cuban National Series.”



MATTHEW HAMON — **USA** Jessica, from the series *Water's Edge*

(OPPOSITE) RJ KERN — **USA** Anna and Helen, Blue Earth County Fair, Minnesota, 2016

“*The Unchosen Ones* is a series of over 60 portraits taken at county fair animal contests in Minnesota. These lead up to the Minnesota State Fair, one of the largest and best-attended expositions in the world. The photographs showcase the subject facing the camera, allowing the viewer to decide what connects and distinguishes these subjects. One isn't born a winner or loser, but a chooser. This is the theme I explore in the series.”





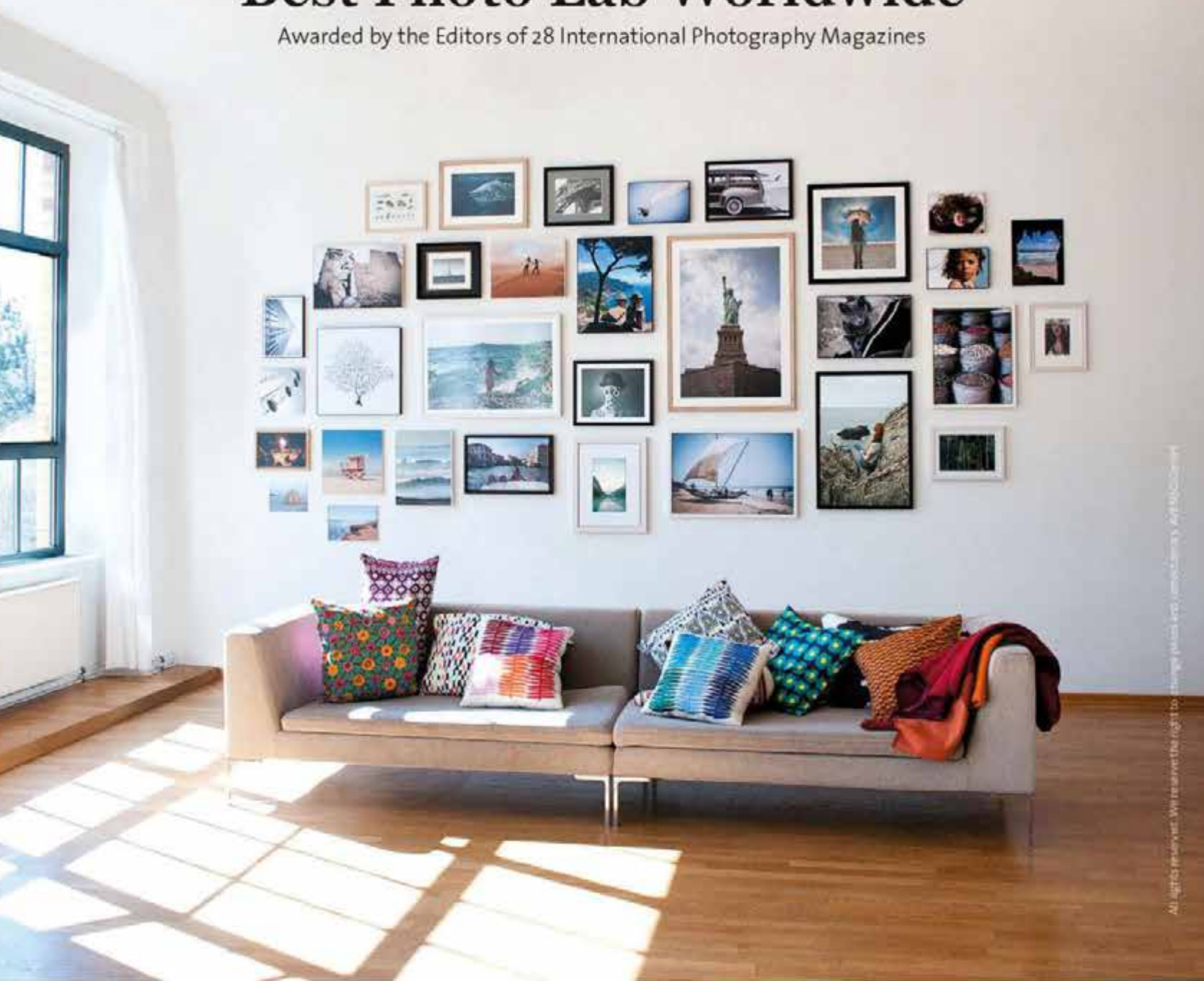
ANDREA ZVADOVA — SLOVAKIA Pigment

"Beauty has no set limits, there is no prescribed recipe. Today we are beginning to see changes towards how beauty is perceived and in the breaking of its stereotypes. Albinism is beautiful and unique, yet still misunderstood. Its uniqueness, however, can lead to separateness and isolation for many people with the condition. By sharing experiences and increasing awareness, we can continue to break these prejudicial boundaries."

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Photography news from around the globe



NEW 42.4MP FULL-FRAME MIRRORLESS MAGNIFICENT SEVEN

Sony A7R III: set to overtake the Nikon D850 in the high-res, high-speed stakes?

A **T FIRST** glance, the Sony Alpha 7R Mark III's headline figures shape up a lot like the old one's.

The Mark III offers 42.4MP full-frame resolution courtesy of a back-illuminated Exmor R CMOS sensor, just like the Mark II. And, just like the outgoing model, the Mark III has 399 AF points.

The improvements between the generations are subtle in some areas – we're talking a bump in the native ISO range from 100-25,600 to 100-32,000 – and significant in others. Take the continuous shooting speed, up from five

frames per second to 10fps. Battery life gets a boost from 290 shots to 530 shots, thanks to the Mark III's new NP-FZ100 battery pack, although this falls behind the Nikon D850's 1,840-shot rating.

And while the new camera has the same number of phase-detection AF points as its predecessor, it offers an impressive 425 contrast-detection points compared with the Mark II's 25.

Video gets an upgrade too, with the Mark III able to record in 4K up to 30fps using the XAVC S codec; it can do this in full-frame or Super 35 mode, the latter without pixel binning for even crisper

footage. The Mark III can also capture Full HD footage at up to 120fps for smooth slow-motion playback, and it also features a new HLG (Hybrid Log-Gamma) profile that supports a compatible HDR workflow.

The A7R Mark III inherits features from the flagship Sony A9 too, including the same 3,686k-dot OLED EVF, a dedicated AF-ON button on the rear, an additional 'C3' custom button and the same advanced Eye AF algorithms for continuously tracking a subject's eye, even if they look away from the camera.

www.sony.co.uk;
£3,199/\$3,198 (body only)



Brett Stirton / Wildlife Photographer of the Year



Eilo Elvinger / Wildlife Photographer of the Year

COMPETITION RESULTS

FRAMING NATURE

BRENT STIRTON
INTERVIEW
See page 88

Brett Stirton is named Wildlife Photographer of the Year with a poignant rhino image

B **EATING** almost 50,000 entries from 92 countries, a powerful image of a recently shot and de-horned black rhino in South Africa's Hluhluwe Imfolozi Game Reserve deservedly takes this year's title for photojournalist Brett Stirton – who we interview on page 88. "Brent's image highlights the urgent need for humanity to protect our planet and the species we share it with," says Sir Michael Dixon, Director of the Natural History Museum. "Like the critically endangered black rhinoceros, blue whales were once hunted to the brink of extinction, but humanity acted on a global scale to protect them. This shocking picture of an animal butchered for its horns is a call to action for us all."



Anthony Barberian / Wildlife Photographer of the Year

Wildlife Photographer of the Year is developed and produced by the Natural History Museum, London. The 2018 competition is now open for entries until 14 December 2017 at 11:30 GMT. www.nhm.ac.uk/wildphoto

FOCAL POINT

Rounding up what's new and exciting



Leica Q (Typ 116) Silver Anodised

Under the shell, Leica's latest is identical to both the existing black and titanium full-frame Qs, but the anodised silver and black shell is certainly different.

<https://uk.leica-camera.com>; £3,770/\$4,495



Gitzo Century bags

To mark its 100th anniversary, tripod manufacturer Gitzo is launching a 'Century' premium Italian cow leather camera bag collection, including a backpack and two messenger bags

www.gitzo.com; From £150/\$TBC

Gitzo GHFG1 Fluid Gimbal Head

Gimbal heads make light work of tracking action with heavy lenses. This model includes a built-in Arca-compatible quick release base, a new Arca-type plate and a detachable pan bar.

www.gitzo.com; £400/\$TBC



OLYMPUS PRO LENSES TRIO GRAND

OLYMPUS is set to properly establish its M Zuiko f/1.2 Pro prime lens series, when its existing 25mm f/1.2 Pro lens is joined by a new £1,200 45mm f/1.2 Pro in November followed by a £1,300 17mm f/1.2 Pro in March. The fast premium lenses feature nine-bladed apertures, 'feathered' bokeh and Z Coating Nano technology for flare reduction, all wrapped up in sturdy dust-, splash- and freezeproof barrels. www.olympus.co.uk

Digital Camera Photographer of the Year 2018

Digital Camera YOUNG Photographer of the Year 2018

ENTER YOUR WILDLIFE PICTURES!

THERE are some great prizes up for grabs in the Digital Camera Photographer of the Year 2018 competition, including Fujifilm cameras and lenses, and Affinity Photo software. Don't put off entering any longer though, as the categories are opening and closing on a monthly basis...

OPEN UNTIL 6 DECEMBER:

- **Wild Wonders**
The subject's your choice, and can be as exotic or ordinary as you like. However, the judges will be looking for images with impact.

- **It's a Small World**
Whether it's an arty abstract, an intrepid insect or a fabulous floral, the judges will be looking for originality in this round.

SEE PAGE 24



FIRST LOOK

24.2MP APS-C COMPACT

HOT SHOT

Canon updates flagship G1 X point-and-shoot

THE G1 X is Canon's premium compact, offering a large sensor and extensive manual controls in a high-grade metal body. The latest incarnation, the G1 X Mark III, ups the ante. Not only is it the first Canon zoom compact to have a DSLR-sized APS-C CMOS sensor – similar to the one in the EOS 80D in this instance – but it also

inherits Canon's well-received Dual Pixel CMOS AF, for fast, accurate autofocus.

Powered by a Digic 7 processor, the G1 X Mark III features a 3x optical zoom equivalent to 24-72mm, 4-stop stabilisation, 7fps shooting with autofocus, a built-in EVF and always-on Bluetooth and Wi-Fi. www.canon.co.uk; £1,149/\$1,299

SOFTWARE UPDATE

LIGHT' SWITCH

Adobe kills standalone Lightroom, goes CC



ADOBE
CC 2018
ON TEST

See page 108

ADOBE has confirmed that Lightroom 6 is the last standalone version of the software and is introducing two new CC options instead. Confusingly, old Lightroom CC has been rebranded as Lightroom Classic CC; this is aimed at users who want to retain a 'desktop-first' workflow, complete with local

storage. All-new Lightroom CC (above) is aimed at users who are more mobile-oriented.

The Photography Plan, with both versions, Photoshop CC plus 20GB of storage costs £9.98 per month, as does the Lightroom CC-only plan, which offers 1TB of storage; £19.97 per month gets you the Photography Plan plus 1TB of storage.

FOCAL POINT

Rounding up what's new and exciting



Leica Thambar-M 90mm f/2.2 lens

Bargain lens alert! This soft-focus portrait lens for the Leica M is a revival of a classic Leica lens from 1935, with the optical design remaining largely unchanged.

www.leica.com; £5,095/\$6,495



Zeiss Milvus 25mm f/1.4 lens

The latest Zeiss manual focus prime for full-frame Canon and Nikon DSLRs features a bright maximum aperture, metal barrel and two aspherical elements.

www.zeiss.com; £1,999/\$2,399

Manfrotto Befree Advanced tripod

Aimed at travel photographers, Manfrotto's Befree Advance line features two models – with either twist or lever locks – both of which come with a new 494 aluminium ballhead.

www.manfrotto.co.uk; from £175



SONY LENSES

SONY ROCK 'N' ROLL

IN addition to the AR7 III (see page 18), Sony has made three other announcements this month. First up is the launch of a £1,199/\$1,298 full-frame FE 24-105mm f/4 G OSS zoom, due for release in November. Development of a G Master FE 400mm F2.8 OSS lens has also been confirmed, with a launch date set for Summer 2018. In non-lens news, Sony is collaborating on new products with Manfrotto and Gitzo. www.sony.co.uk



INSTANT CAMERA

LOMO EXOTIC

SAID to be inspired by bronze beaches and opulent Egyptian jewellery, the new Lomo'Instant Automat Dahab is a special copper edition of Lomography's most advanced automatic instant camera. Available as a £139/\$169 Single package or a £169/\$199 Combo package with four additional lens attachments, the Dahab takes the range to five variants, each of which takes Fujifilm Instax Mini instant film. <http://shop.lomography.com>

GO TO
www.digitalcameraworld.com
FOR THE LATEST
NEWS, REVIEWS
& TECHNIQUES

SONY



α9

Game Changer

Push the boundaries of photography with the world's first* full-frame stacked CMOS sensor. A silent shutter with 20fps burst shooting and blackout-free viewfinder means capturing legendary moments that have never been possible before now.

INTRODUCING THE α9 FROM SONY

4K

Exmor RS
CMOS Sensor



Discover more at: www.sony.co.uk

*The world's first as 35mm full-frame stacked CMOS image sensor with integral memory, as of April 2017, based on Sony research.
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FROM TOP TO BOTTOM:
'Heathrow Roostings' by Daniel Trim, Urban Wildlife winner and overall winner

'Crepuscular Contentment' by Andrew Parkinson, Animal Behaviour winner

'Murder in the Garden' by Wendy Ball, Urban Wildlife highly commended



COMPETITION RESULTS

BRITAIN'S GOT TALONS

Winners and commended entries revealed in the British Wildlife Photography Awards

A **NOTHER** high point on the nature photographers' calendar, the British Wildlife Photography Awards exist to celebrate the beauty and diversity of British wildlife.

Up against the tooth-and-claw vividness of African and American nature, it's easy to dismiss much of British wildlife as 'little brown jobs', but the BWPA has shown this isn't the case. This year's top images include

a hunting short-eared owl, vivid green aquatic hydras and a cracking selection of creative coastal bird shots.

The top prize of £5,000 goes to Daniel Trim, for his shot of a pied wagtail silhouetted by the lights of Terminal 5 at Heathrow Airport. You can see Daniel's image alongside the cream of other entries in the competition book by Ammonite Press, and in the touring exhibition.

www.bwpawards.org

FOCAL POINT

Rounding up what's new and exciting



Quadralite A1 lighting device

Like the Godox A1 before it, this 3-in-1 box of tricks for smartphones features a 1W LED lamp, an 8Ws flash unit and a built-in wireless trigger for Quadralite and Godox lights.

www.quadralite.eu; £151/\$204



Samyang 35mm f/1.4 FE lens

The fourth autofocus lens from Samyang is designed for Sony's full-frame mirrorless cameras and includes two high refractive elements as well as two aspherical ones.

www.intro2020.co.uk; £599/\$TBC

Pholio

UK start-up Pimloc has unveiled Pholio, an in-home box that's designed to provide AI-fuelled search of your entire photo collection. Pholio can recognise 20,000 search terms when used offline.

www.pholio.io; £199 (early orders)



SIGMA 16MM

TOP OF THE CROPS

FOLLOWING the launch of its 30mm f/1.4 last year, Sigma is to release a new 16mm f/1.4 DC DN Contemporary for Micro Four Thirds and Sony E-mount. The new lens will give the 35mm equivalent view of 24mm on Sony APS-C bodies and 32mm on MFT. It's dust-/splash-proof and features a stepping motor for smooth AF during video recording. Price and launch date are to be confirmed. www.sigma-imaging-uk.com



INDUSTRY NEWS

NIK ON AGAIN

DxO has acquired the Nik Collection from Google. It was only in May that Google announced that it had no plans to update the suite of image-editing tools and filters. DxO has confirmed that the Nik Collection 2018 Edition will be released mid-2018, with Nik's U Point technology already available in DxO PhotoLab (above). www.dxo.com

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NEWS, REVIEWS
& TECHNIQUES

SONY



Tomorrow's lenses today, from Sony

Lens standards are changing. Advances in camera performance and soaring creative ideals demand a new approach to lens technology.

Sony now redefines the lens, with a clear vision of the future. The G Master revolution begins with large-aperture lenses that achieve a supreme blend of high resolution and beautiful bokeh.



Discover more at: www.sony.co.uk

All lens availability is dependent on market release dates.

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Digital Camera Photographer of the Year 2018



To enter, head to www.photocrowd.com/dcpoty. Entries cost £1 to £3 per image, with *Digital Camera* readers receiving a 50% discount by entering the code: **DCPOTY1850**



ENTER OUR COMPETITION AND WIN BRILLIANT PRIZES!

NOW for some exciting news: we are launching our very own *Digital Camera Photographer of the Year* competition! With a heap of fantastic prizes up for grabs, and a

panel of top professional judges at the ready, it's set to be big, bold and brilliant.

We want as many readers as possible to enter, so we're revealing all of the categories now. You can enter as many

times as you like, so start planning your photos today! There are amazing prizes for the winners of each category, and even more for the overall Photographer of the Year 2018 winner.



Overall winner prizes

PHOTOGRAPHER OF THE YEAR
PRIZES INCLUDE

Fujifilm X-T2, Fujinon XF 16-55mm f/2.8 R LM WR, Fujinon XF 50-140mm f/2.8 WR OIS, Apple 64GB 12.9in iPad Pro & Apple Pencil (courtesy of Affinity Photo), Affinity Photo software, *Digital Camera* subscription, photos published in the magazine and displayed at The Photography Show 2018

WORTH OVER £4,800

SUBMIT YOUR ENTRIES TODAY AT

TERMS AND CONDITIONS: All photographs entered must be your own work and must not infringe on anyone else's copyright. You may enter a maximum of six photos in each category of this competition. By entering your photographs, you consent to them being published by *Digital Camera*, published by Future plc. The judges' say is final. Full Photocrowd terms and conditions at www.photocrowd.com/terms

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PHOTO

Professional photo-editing software
Affinity Photo redefines the boundaries for professional photo editing software.
With a meticulous focus on workflow, it offers sophisticated tools for enhancing, editing and retouching your images in an incredibly intuitive interface.



The judges

Meet the fantastic professional photographers who will be picking the winners



Ben Brain



Paul Gallagher



Lottie Davies



Will Burrard-Lucas



Levon Biss



Kate Hopewell-Smith



Paul Hill
MBE



Morag Paterson
and Ted Leeming



Damien
Demolder



The categories

Each category will have a Judges winner and a Crowd Vote winner

1 Mono Magic

Show us your best black-and-white images. Any subject you like, as long as it's mono.

CLOSING DATE 20 November 2017

HURRY!

4 It's a Small World

Grab your macro lens and explore miniature marvels in the world around you.

CLOSING DATE 6 December 2017

OPEN NOW

2 On the Road

Travel photography that reveals a sense of adventure is what we're after here.

CLOSING DATE 20 November 2017

HURRY!

5 Character Study

Portraits with personality and originality are the name of the game here.

OPEN TO ENTER 6 DEC to 15 JAN

6 Smart Arts

Our smartphone photography category puts your skills as a photographer first.

OPEN TO ENTER 6 DEC to 15 JAN

OPEN NOW

3 Wild Wonders

This is the wildlife category. And just to clarify, we don't mean your family pet!

CLOSING DATE 6 December 2017

7 The Great Outdoors

Your landscape shots – urban, coastal or wild – should capture a sense of place.

OPEN TO ENTER 1 JAN to 12 FEB

8 Street Seen

Street photography that packs a punch, no matter what you focus on, is key here.

OPEN TO ENTER 1 JAN to 12 FEB

ENTER TODAY!
Each category's Judges winner gets a Fujifilm Instax SQ10, Affinity Photo software and Affinity Photo Workbook
Each category's Crowd Vote winner gets a one-year Digital Camera subscription

WWW.PHOTOCROWD.COM/DCPOTY



Digital Camera YOUNG Photographer of the Year 2018

To enter, head to www.photocrowd.com/dcpoty. Entries cost £1 to £3 per image, with *Digital Camera* readers receiving a 50% discount by entering the code: **DCPOTY1850**



ENTER OUR COMPETITION AND WIN BRILLIANT PRIZES!

YOUNG people (25 and under) haven't been left out of the *Digital Camera* Photographer of the Year competition! In fact, they have their own division within each

category, with a fresh set of prizes to be won, as well as a chance to be crowned the overall *Digital Camera* Young Photographer of the Year 2018. The same panel of professional

photographers will judge your entries in the same themed categories as the main competition. You can enter as many times as you like. (You can even enter the main competition and this one.)



Overall winner prizes

YOUNG PHOTOGRAPHER OF THE YEAR
PRIZES INCLUDE

Fujifilm X-T20 with XF 18-55mm silver kit lens,
Fujinon XF 55-200mm f/3.5-4.8 R LM OIS, *Digital Camera* magazine subscription, £500 MPB.com voucher, photos in the magazine and displayed at The Photography Show 2018
WORTH OVER £2,600

SUBMIT YOUR ENTRIES TODAY AT

TERMS AND CONDITIONS: Digital Camera Young Photographer of the Year 2018 competition open to photographers aged 25 and under when the competition closes (12 Feb 2018). All photographs entered must be your own work and must not infringe on anyone else's copyright. By entering your photographs, you consent to them being published by *Digital Camera*, published by Future plc. The judges' say is final. Full Photocrowd terms and conditions at www.photocrowd.com/terms

25
AND
UNDER

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Easy photography kit trading
MPB.com is changing the way that photographers trade equipment online, forever. Open to EU and US customers, it offers a hassle-free and secure process for sellers, and makes buying used kit as simple and enjoyable as buying new.



The judges

Meet the fantastic professional photographers who will be picking the winners



Ben Brain



Paul Gallagher



Lottie Davies



Will Burrard-Lucas



Levon Biss



Kate Hopewell-Smith



Paul Hill
MBE



Morag Paterson
and Ted Leeming



Damien
Demolder



**ENTER
TODAY!**

Each category's Judges winner gets a Fujifilm Instax SQ10 worth £249

Each category's Crowd Vote winner gets a one-year Digital Camera subscription

The categories

Each category will have a judges' winner and crowd vote winner

1 Mono Magic

HURRY!

Show us your best black-and-white images. Any subject you like, as long as it's mono.

CLOSING DATE 20 November 2017

2 On the Road

HURRY!

Travel photography that reveals a sense of adventure is what we're after here.

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OPEN NOW

This is the wildlife category. And just to clarify, we don't mean your family pet!

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4 It's a Small World

OPEN NOW

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OPEN TO ENTER 1 JAN to 12 FEB

8 Street Seen

Street photography that packs a punch, no matter what you focus on, is key here.

OPEN TO ENTER 1 JAN to 12 FEB

WWW.PHOTOCROWD.COM/DCPOTY

PHOTO PROJECTS

*Eight fresh challenges to
push your photography
in new directions*

[PROJECT 1]

Minimal vistas

Learn to love the rain

Digital Camera editor **Ben Brain** heads to the Welsh mountains for some wet and wild minimalist landscape photography

S **TRIPPING** back a landscape into bold graphic shapes can be a great way to invigorate your photography. Applying visual minimalism helps you learn to look at, and engage with, the land and light in exciting new ways.

There are times when the weather can help achieve a simple look even if doesn't immediately appear to be on your side. In this image, taken

in Snowdonia, the inclement weather was frankly bad enough to justify a hasty retreat to the warmth of a roaring fire. However, the appalling conditions also presented an often overlooked photographic opportunity.

By filtering out the descriptive detail of the land's surface and focusing on shape and subtle tones created by the misty aerial perspective, we were able to achieve a peaceful scene.

Top tips for bad-weather landscapes

- 1** Don't be put off by bad weather! Even if it's tipping down, opportunities to make interesting photographs are there.
- 2** Most cameras are splashproof, but if it's raining heavily, be sure to protect your gear from the elements.
- 3** Pack plenty of lens cloths. Keeping your lens free of water drops is a persistent challenge.
- 4** Use a lens hood to help protect the surface of the lens from drops of water, and try and avoid shooting directly into driving rain.
- 5** If it's not too windy (unlikely), an umbrella can be useful too.



[PROJECT 2]

Easy access Organise your photo tips cards

Reader **Alexander Prescott** shares a simple yet brilliant way to keep your free tips cards handy

LOVE your regular photo inspiration cards from *Digital Camera* but don't want to buy a business card holder to keep them handy? Then try out this low-cost do-it-yourself alternative...

I really enjoy using the photo tips cards when I'm out and about, but I found that as I steadily collected more and more, I was struggling to keep them together.

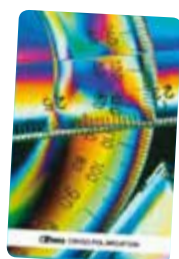
I looked at buying a business card holder or a dedicated wallet

but it was really expensive (at least in Canada, where I live). So I visited the dollar store and came up with another way of transporting the cards and storing them, using cheap thin shower curtain rings – the hinged, lightweight metal type.

To try this, you will also need a hole punch, and you might like to also get some self-adhesive hooks or a metal rod to store your cards on. You could even laminate the cards first to showerproof them if you're feeling really fancy.

USE THIS
MONTH'S
TIPS CARDS!

Four cards with
settings and
creative ideas



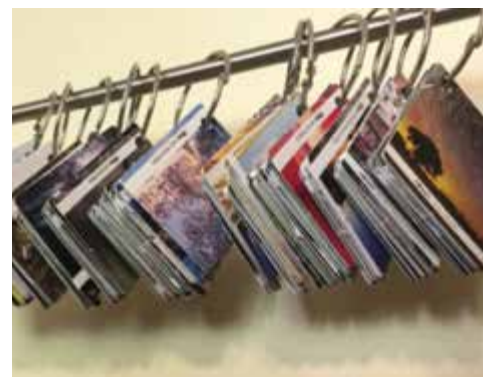
Step 1

First, grab a tips card and pick a consistent spot to punch a hole in – the theme logo on the back is handy, as it is always in the same spot. Align the spot in a hole punch and push down, doing one card at a time to avoid damaging the hole punch and to stop the cards slipping, which could lead to inconsistent hole positions. Check the hole is cleanly punched through.



Step 2

Next, take your hole-punched card and thread a shower curtain ring through the hole. Repeat this with all of your cards, combining the various themes in your collection into sets – such as landscape, wildlife, macro, and so on – or pick your favourites. You can easily swap them around and add to them as your collection grows.

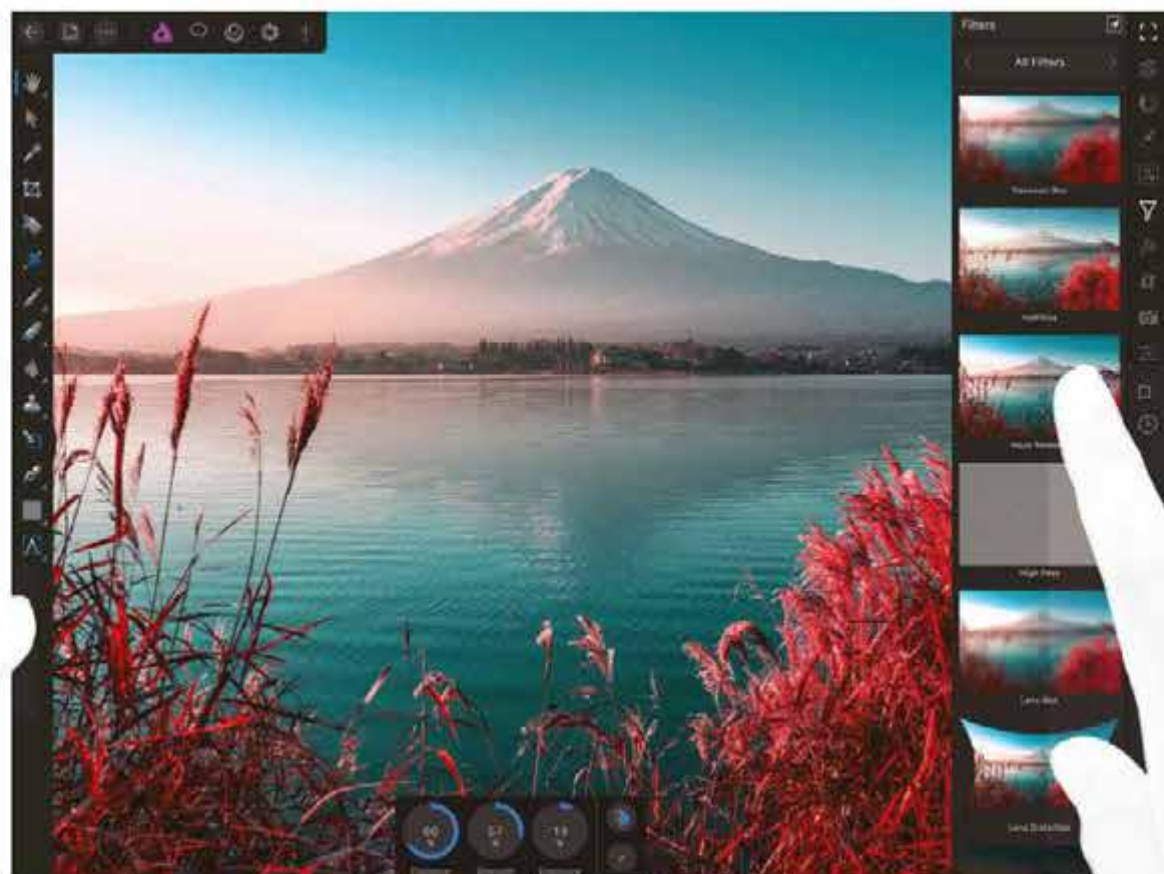


Step 3

Use a metal rod or adhesive hooks to store your sets of cards for easy access. Then, when you go off on your next photography adventure, grab an appropriate theme set and simply attach the photo card ring to your camera bag before you head out the door.

Francis J Taylor

Ultra-fast, powerful and immersive photo editing wherever you go



AFFINITY PHOTO: the first fully-featured,
truly professional photo editing tool for iPad.

"It's mobile photo editing 'neat' not watered down...having something like this for iPad is extremely exciting." – SLR Lounge

"Serif has put a ton of features into this mobile application, and it looks rather impressive." – Imaging Resource

"The iPad Pro made it impressively easy to achieve great results with Affinity Photo" – Stuff

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Editors' Choice

Also available on Mac and Windows. | No subscription.

[PROJECT 3]

Quickfire projects

Negative space

Embrace empty space in compositions with James Paterson's quick ideas

Corner your subject

Negative space is anything that is lacking in detail, blurred or otherwise plain, while positive space is an area of interest – a main subject or notable detail. Over-emphasising the negative space in a shot can create bold compositions and a fresh take on a well-worn place, such as this lighthouse in Burnham-on-Sea. Experiment by moving your subject around to different edges or corners of the frame. You'll get different results depending on whether you change the camera angle, or get up and move to a different spot. A wide-angle zoom lens can be very useful for this.



Emphasise blur

As well as the placement of the subject, you can create negative space with depth of field by blurring parts of the frame. A wide aperture, like $f/2.8$, helps achieve this, but also try getting up really close to surfaces to emphasise the blur – the camera was on the ground here. Pulling back to include the empty wide expanse of beach and sea heightens the sense of isolation to create a more sombre – and perhaps even a more meaningful – picture than filling the frame with the lighthouse would.



James Paterson

Frame your shot

A classic compositional device is to create a frame within a frame by composing through objects so that they surround the subject like this. Here the out-of-focus lighthouse's legs become part of the negative space, framing the dog.

Any subject – a building, a person, a flower – will work for negative-space photography, and a tripod will help perfect your composition. To get a feel for negative space, why not revisit a few old photos from your image library and experiment with different crops?



18MM

400MM



ONE LENS, NO LIMITS

18-400 mm F/3.5-6.3 Di II VC HLD

22.2x WORLD-RECORD ZOOM RANGE

The new Megazoom lens from Tamron provides unlimited photographic possibilities for most situations, you can shoot everything from landscapes to portraits, sports and wildlife with one lens.

With a focal length of 18-400mm - equivalent to a 22.2x zoom, plus built-in VC image stabilisation for optimum performance, Tamron gives you the ultimate ultra-telephoto all-in-one zoom.

For digital SLR cameras with APS-C sensor from Canon and Nikon.
The pictures show the real focal length, whereby the length of the lens is only schematically displayed.

5

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TAMRON



Flash project

Shoot a glossy product shot

It's time for a tippie with a demo on the essentials of still-life photography



T **O make a still-life photo really sing, you have to nail the lighting.** Look at professional product shots, especially those of luxury items, and you'll notice that they're carefully lit to make the product look glossy and desirable. Here we're going for the big daddy of problematic subjects to light – glass. Glass contains considerable

opportunity for both desirable and unwanted reflections, so controlling the light is key to getting a striking final image.

We're using a bottle and a glass of whisky to create a classic still-life shot that resonates style and timelessness in equal measure. You'll be surprised to hear that it's easy to take a shot like this at home. You don't need any special equipment, just

a couple of lights (they could even be desk lamps) and some diffusion.

An interesting backdrop will also help to create an eye-catching, professional-quality image, so we scouted out a gorgeous location that was happy to host our shoot. See if you can find a similarly appropriate backdrop for your shot, whatever object you capture.



Step 1

Create an inviting backdrop for your still-life. Lots of spots in your home or nearby could add interest if you look carefully and with a creative eye – more so than using a plain paper backdrop. Think about dressing the scene with props, too. We used a slate tile to rest the whisky bottle and glass on, to create some texture.



Step 2

We placed two flashguns in softboxes camera-left of the bottle and the glass to side-light the edge. We then placed a shower curtain in front of these for further diffusion. The lights cover an area of about 3ft, from the front of the bottle and onto the wood in the background, so they spread the light beautifully.



Step 3

To get some light bouncing through the bottle in an attractive way, fold some silver or gold card and cut it out into the shape of the bottle at the front, with a stand to prop it up at the back. Position the card on the opposite side to the light at a 45-degree angle, so that it bounces light through the product.



Step 4

To take the shot, the light power was set at 1/4 power, and we dialled in an aperture of f/6.3 into the camera to throw the background out of focus. We moved from 1/200 sec shutter speed (sync speed of flash) to 1/30 sec to lighten the backdrop exposed by the room's ceiling lights, at ISO 100 to reduce noise.

Focal Length: 600mm Exposure: F/11 1/800sec ISO: 500



SP150-600_{mm} G2

You're never too far from a great close-up.
Discover the next generation ultra-telephoto
zoom lens from Tamron.



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SP 150-600mm F/5-6.3 Di VC USD G2

For Canon, Nikon and Sony* mounts
Di: For APS-C format and full-frame DSLR cameras
* Sony mount model without VC

[PROJECT 5]

Creative project Ultraviolet fluorescence photography

*Natural history, wildlife and scientific photographer **Adrian Davies** shows you how to make the invisible visible*

ULTRAVIOLET (UV) fluorescence is the visible light that is emitted from a subject when it is illuminated (the technical term is 'excited') by UV in a dark room. Think of the longwave UV lights used in nightclubs, funfair ghost trains and so on that make shirts glow a brilliant white due to the whitener in the fabric.

Many subjects fluoresce in UV, including some minerals (which can be identified by the colour they produce); security markings on banknotes, passports and driving licences; some plant material (including the quinine in tonic water, fruit and some woods); different birds' eggs;

some animals such as scorpions; and various cosmetics such as face paints. A walk around the garden at night with a UV torch, or in your bathroom, can be an enlightening experience. The technique is also used by forensic scientists and art restorers.

UV fluorescence photography is much easier now than it was before, thanks to the availability of relatively cheap yet powerful UV torches containing LEDs.

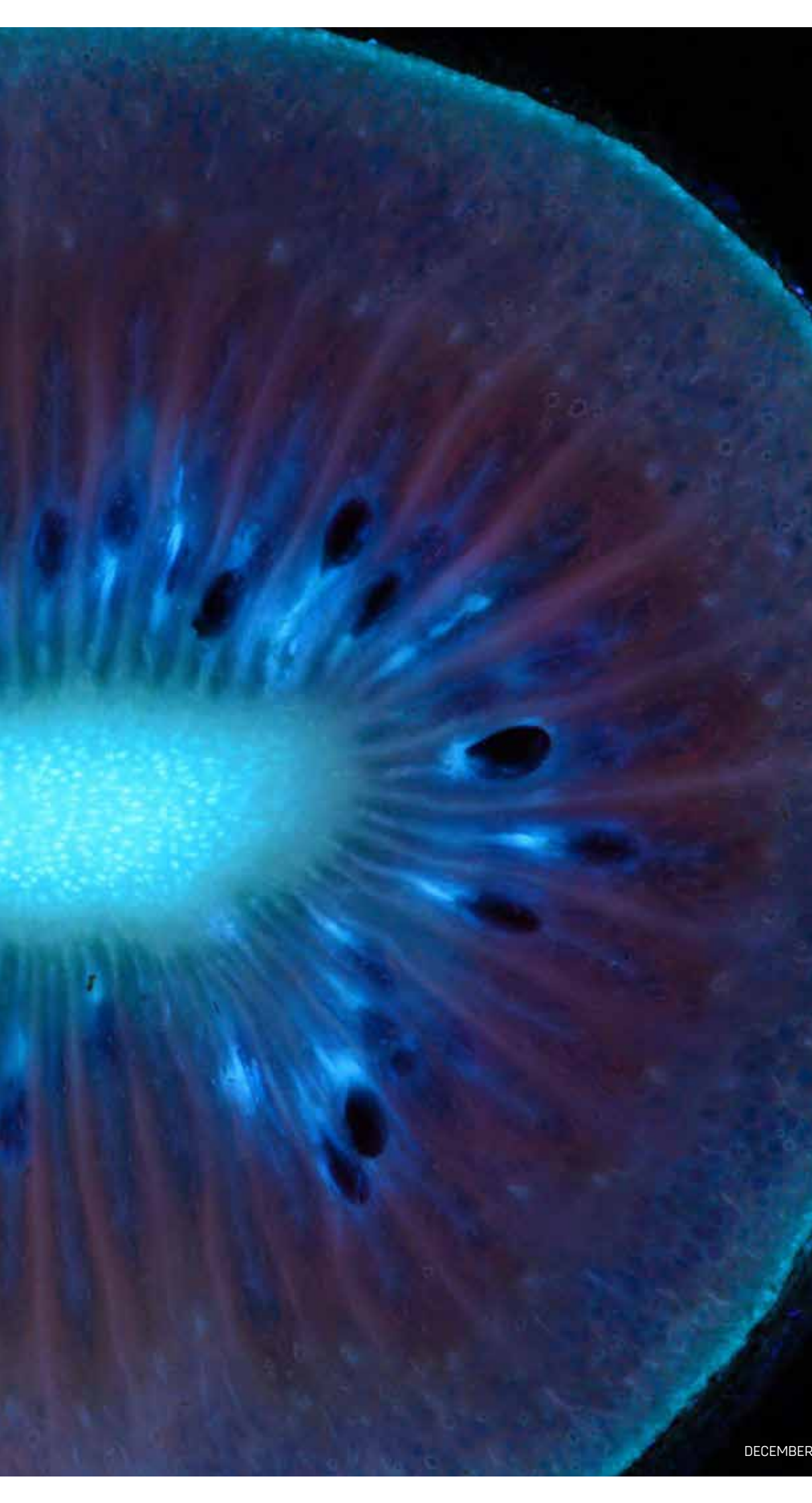
The technique can yield some startling and unexpected results.

There are several models of UV torch on the market, but you will need a relatively powerful one for photography purposes. My current favourite model is the

Convoy S2+ 365nm Nichia UV Waterproof LED Flashlight, which costs around £20. The most useful type is one that emits UV at a wavelength of around 365 nanometers.

For UV fluorescence photography you will need to be in a dark room, so that the only light reaching the subject is the UV from the torch. Virtually any camera and lens can be used, though they must have the ability to shoot long exposures. You will need a lens with a macro or close focusing facility for smaller subjects, a good solid tripod and a remote release.

Turn over for your step-by-step guide to UV photography



Biography Adrian Davies

Adrian Davies is a freelance wildlife, natural history and scientific photographer. He taught photography for over 25 years in a college, and has written several books on various photographic and natural history topics. His most recent book is *Digital Ultraviolet and Infrared Photography*, published by Focal Press, and he runs workshops on various aspects of photography. www.imagingtheinvisible.com
www.adriandaviesimaging.com

Safety first!

UV wavelengths from the sun can cause sunburn to the skin, and prolonged exposure to UV can also cause greater damage or even skin cancer – so take great care when using powerful UV torches. In particular, *never point them towards someone's eyes*. If you are photographing teeth or fluorescing face paint, get your model to shut their eyes during the exposure. If you are going to do a lot of this work, it may be well worth getting a pair of UV absorbing safety glasses. (Ski goggles will work too, as these are designed to absorb the UV light wavelengths that can cause snow blindness.)

Take care, too, when working in a dark room. I use a head torch so that I can make adjustments to the camera and subject without having to move around in the dark.



Step 1

Place the subject on a dark background. Here you can see the subject for this shoot, a carniverous pitcher plant (*Nepenthes*), as it looks in visible light, set against a black backdrop. Don't use black paper, as you will find the paper itself may fluoresce and glow brightly under UV light. I tend to use good-quality black velvet, though even this material may need to be darkened in Photoshop afterwards. Also, the smallest specks of dust may also fluoresce, and will need to be retouched later, which is easily done with Photoshop's Spot Healing Brush.



Step 2

The output from most LED torches is not even, with a definite 'hot spot'. I therefore like to 'paint' the subject with the light, moving it constantly throughout the exposure, making sure to cover the top, bottom and sides of the subject. Keeping the torch a fair distance away from the subject will also help to give a more even lighting. I try to use an exposure of 10 to 20 seconds to have time to paint all areas of the subject. I use the Mirror Up facility on my SLR, with a remote release. I like to use a low ISO, usually 200, to keep image noise to a minimum, and an f/11 aperture.

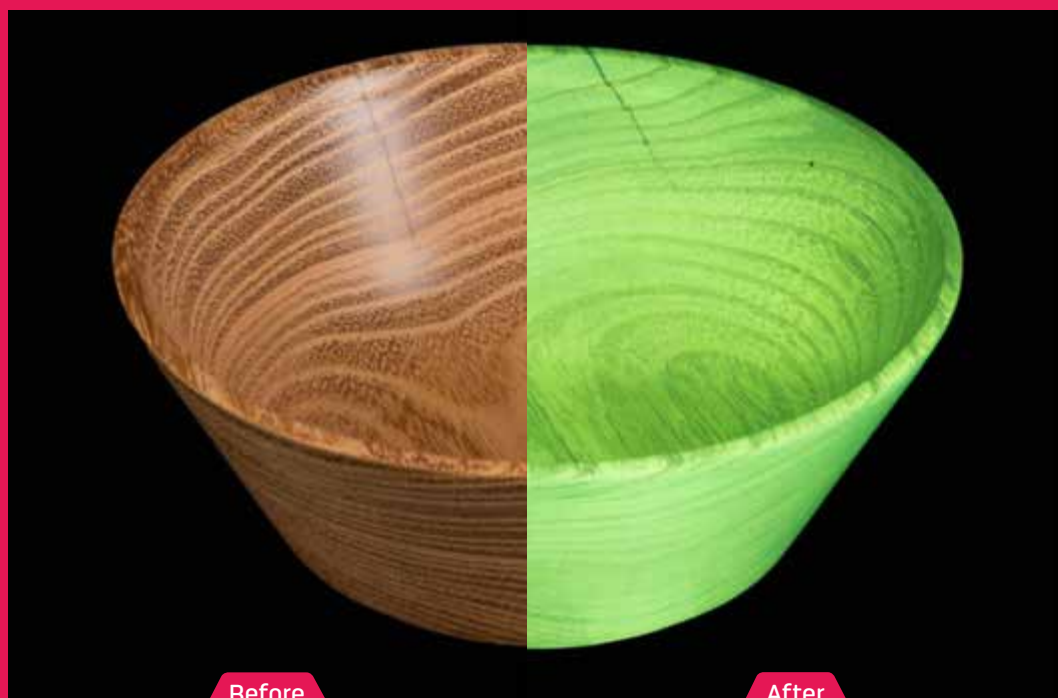


Step 3

Exposure can be determined by doing a few tests. I find that the Aperture Priority mode works reasonably well, and if necessary it can be adjusted using the exposure compensation facility on the camera. The final image should show the bright fluorescent colour, with just the outline of the subject. If you are photographing subjects that may move during a long exposure, such as delicate plants, you will need to keep very still during the exposure. You may even need to hold your breath to minimise the air currents in the room!

Before and after

When I shoot UV fluorescence images, I like to shoot a normal visible light image to compare it with. I use the same lens and camera, and one or two electronic flashguns with softboxes, to illuminate the subject. This wooden bowl, made from black locust wood, fluoresces a bright green colour in UV.



Before

After

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digitalcamera@
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(subject line:
Photo Projects)

SAMYANG AF

A new range of
autofocus lenses for
Sony FE mount

AF 14/2.8FE

NEW

AF 35/2.8FE

AF 50/1.4FE



Auto Focus


Full Frame

Ultra Compact & Light

High Resolution

SAMYANG

www.intro2020.co.uk/samyang

 SamyangUK



[PROJECT 6]

Spirit levels Banish wonky horizons forever

Use a hotshoe spirit level to fine-tune your composition for straight horizons

L **LANDSCAPE** photography is a notoriously difficult genre to crack. Many obstacles stand between you and the perfect landscape shot: the height and angle of the sun, inclement weather and uninteresting foregrounds all play a role in degrading your final image. The last thing you need is to find the right location, at the right time, only to come home with a wonky image that you have to crop into later on the computer. There is a way to keep the full resolution of your images, and that's by using a hotshoe-mounted spirit level.

With this handy accessory, there's no reason why you shouldn't come away with perfectly straight images every time. Due to its small form-factor and light weight, you can leave it on the camera in and out of the bag when out on location.

It's compatible with any camera make, model, whether film or digital (provided it has a hotshoe); and it works all day, every day, without a hitch.

When you come to line up your shot, you can avoid the glare-ridden back screen on your DSLR or CSC and instead focus on the X- and Y-axis aligned bubble meters in the level. So if you want to tilt the camera up or down along the Y axis, you'll still have the other gauge to keep your horizon straight.



Step 1

Put your camera onto a sturdy tripod. Slide your spirit level into the hotshoe on your camera. It has a dual-axis design, so it will fit in two different ways into your hotshoe.



Step 2

Now it's time to line up your shot, using the spirit level, to get a perfect horizontal or vertical to your photo. Now take your shot, and never get wonky horizons again!





Welcome to the family Profoto A1

The A1 is every inch a Profoto light – just smaller. Its round head delivers light that's both natural and beautiful. And it's incredibly easy and to use, with superfast recycling and a long-lasting battery, so you'll never miss a shot. On the move, shooting on-camera or off, this is light shaping excellence everywhere.

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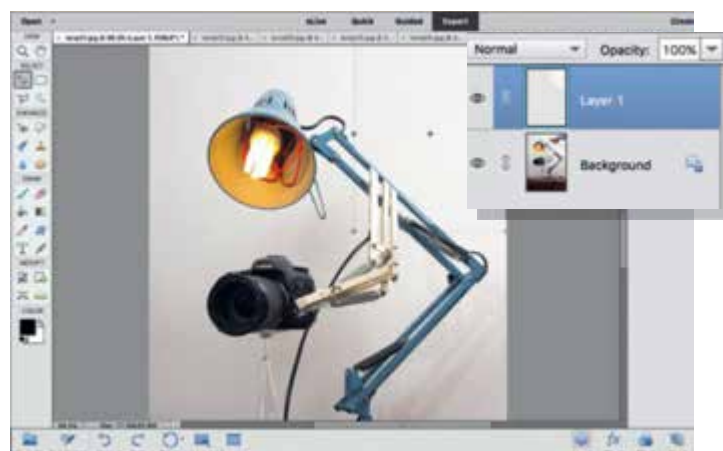
[PROJECT 7]

Composites Quirky still-life

James Paterson makes light work of composites in Photoshop Elements

P **HOTOSHOP Elements boasts powerful compositing tools that can help you create all manner of mechanical mash-ups.** So why not take a few photos and fuse them together to make a character like our lamp-robot?

Electrical items make for good composite subjects: the clean lines and hard edges mean they're both easy to cut out and simple to combine. We used two angle-poise lamps and simply held the gold one up next to the blue in various positions to form the arms and hands, while the robot's camera sat on an upturned glass. You can make your composite like this...



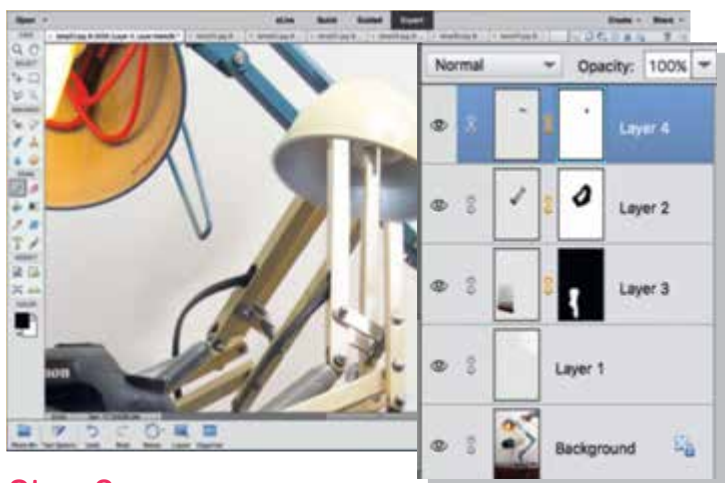
Step 1

In Expert mode, open your photos and choose your main image. To cover up elements that you don't want (such as your hands), use the Polygonal Lasso tool to roughly select a suitable area of another image. Copy and paste that area and move into place.



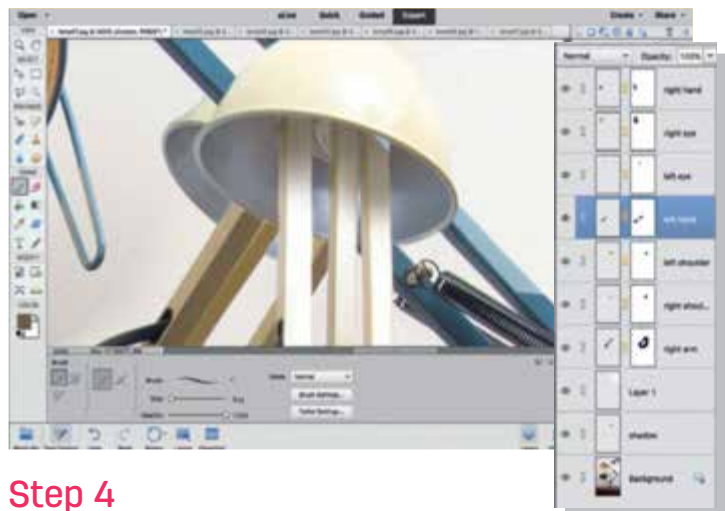
Step 2

Similarly, to add elements, select, copy and paste them in. Add a layer mask to adjust these. Grab the Brush tool, set the colour to black and use a soft-edged brush to hide parts of the layer behind others. Conversely, use a white brush to reveal parts of a layer.



Step 3

To add a smaller element, select it with the Quick Selection tool and paint over anything you don't want. Click Refine Edge and increase Smooth and Radius. Copy and paste it over. Press Ctrl/Cmd+T if you want to resize it, then paint a layer mask to blend it.



Step 4

To add shadows, Alt-click to sample a shadow area then paint in shadows in key places (like where the arm meets the shoulder). Once you have all your elements, use the Spot Healing Brush and the Clone tool (set to Sample All Layers) to tidy up messy areas.

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Sam Adler



Biography Cig Harvey

Cig began working in a darkroom at 13 and has been dedicated to photography ever since. She grew up in Devon, and moved to the USA for her MFA in 1999. She currently lives in Maine. Her photographs and art books have been widely exhibited, and remain in the permanent collections of major museums and collections.



C OLOUR is a powerful tool that can simply convey a feeling or tell a story in photography. So why not try experimenting with photographs that take colour to the extreme?

Framing a bold slab of colour against a dull background, or piecing together compositions with limited colour palettes, using hues of one colour, can have a dramatic effect.

"I have always been obsessed with colour," explains photographer Cig Harvey. "I like to explore one colour intensively to distil and concentrate its effect. Each colour elicits a different emotional response, both on a primal level and as linked to my own memories. In these images, I am searching for a visual jolt – an element of surprise."

To create single-colour images, Cig advises: "Start with a large background of one colour and then

add or look for subject matter of the same hues, and begin layering."

Rather like painting a masterpiece, these bold colour shots work best when they're planned and purposeful. This process of layering backdrops and subjects with similar colours but different textures and shapes builds levels of interest for viewers.

In the 'Red Cloak' image (above), for example, Cig used only natural light – as she did for all three of these shots – with the chair's shadow extending the main subject's velvety texture to the wall behind. The silhouette of a tree outside brings its own element of intrigue to an otherwise minimalist composition. To get this shot, Cig used a Pentax 645Z medium-format camera with a 55mm lens, and a depth of field of f/3.5.

Each of Cig's colour shots involved using different cameras, lenses and settings to suit the scenes that she

[PROJECT 8]

Pro's challenge Play with colour

*Award-winning photographer
Cig Harvey explores the
possibilities of colour*



dreamed up. She took 'Scout in the Blizzard' (above right) using a Sony RX1R II professional compact camera, which has a fixed 35mm lens, and an aperture of f/11. She took 'Faith and the Bubble' (right), meanwhile, on a Canon 5D Mark III with a 35mm lens, using a shallow depth of field of just f/1.4.



Cig's previous two books have been named among the PDN's Best Books of the Year 2012 and received critical acclaim in *Vogue*, *The Telegraph*, *Aesthetica* and more. Cig's third book, *You an Orchestra You a Bomb* (Schilt Publishing) is out now. www.cigharvey.com

Above left — 'Red Cloak' explores rich wine colours using sumptuous textures. Even the shadows and reflections add to the colour layering process.

Above — 'Scout in the Blizzard' uses the contrast of the all-red outfit against a snow-dulled background to make an impact.

Right — 'Faith and the Bubble' puts the emphasis on the subject and her playful actions by using a shallow depth of field.



Cig Harvey

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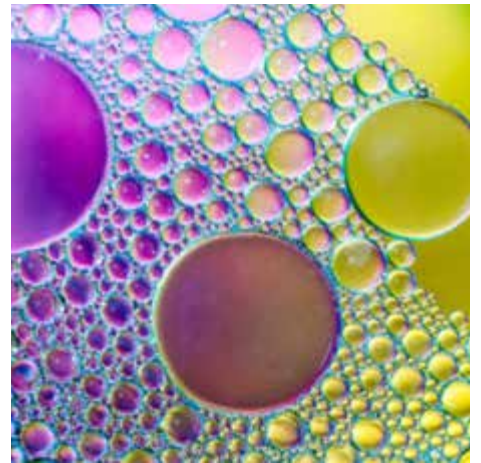


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12 CREATIVE PROJECTS

*Use water, ice, fire and light
to take your photography
in bold new directions
by Jon Adams*





Project 1 Split-second sculptures

*Turn a drop of water
into a solid shape
by freezing its motion*



THE reason we know how water drops behave is thanks to high-speed photography. But you don't need high-tech gear to create water art. The set-up for this project is simple, but you'll need accurate focusing and good timing.

Fill a baking tray with water and place it on a worktop. Place a chair over it, so you have somewhere to attach a freezer bag half-filled with water. Punch a hole in the corner of the bag with a safety pin, and you'll get a regular flow of drips into the tray.

Put your camera on a tripod and fill the frame with the drip tray water and the drip itself. A macro lens can be useful but isn't essential. Whatever you place behind the drip tray will be reflected in the water, so experiment with paper sheets of different colours and textures. With your set built, place a flashgun to one side, propped up on some books, and point it at the background.

Accurate focusing is essential, so switch to Manual Focus mode and place the tip of a pencil at the splash site. Focus on this, then switch to Manual Focus. Now you just have to concentrate on getting your timing right.



STEP 1

Set up your camera and flashgun

Use Aperture Priority mode and set a small aperture of f/18 to give a good depth of field. Plug in a cable release if you have one, as this makes timing shots easier, and take a test shot to make sure your off-camera flashgun is firing correctly.



STEP 2

Freeze your sculpture in place

With everything set up, you now just have to concentrate on timing. Get into the drip rhythm, and once you've recorded a good splash, check the shot on-screen to confirm your splash is sharp. If not, tweak the focus and continue shooting until it is.



Project 2

Shoot a rainy-day portrait

Use depth of field to capture pensive people pics



WHEN you shoot a portrait, the golden rule is to focus on the eyes. But rules are made to be broken, and

you can shoot evocative portraits without any of the face in focus.

Pick a window on a rainy day, and you'll notice beads of water on the

Above Suggest the emotion in your model by shooting them through a rain-soaked window.

glass. With your subject positioned on the other side of the pane, you can use these beads as your focal point, and shoot a sombre, reflective portrait that's just as effective as a regular headshot.

Shoot inside-out to convey the idea that the subject is out in the cold, or shoot outside-in to give the sense of someone longing for a

break in the weather. To make the shot really effective, you need a very shallow depth of field, so only the beads of water are held in sharp focus. To do this, use a lens with a fast maximum aperture like a 50mm f/1.8 prime. In Aperture Priority mode, dial in the lowest f/number, and frame up on the subject. Focus on the drops, and take the shot.



Project 3 Oil and water abstracts

Get colourful, high-impact close-ups that reveal amazing detail



WITH a macro lens and a few everyday items, you can take incredible shots of oil drops floating on water. Like most macro

shots, setting up carefully is essential, but the process forces you to focus on minute details. The discipline that

comes from trying out this project will extend through your other styles of photography, so shooting delicate abstracts is of great overall benefit.

To prepare, fill a tumbler with water and add a drop of washing-up liquid to it. After a gentle stir, leave it to settle for 5-10 minutes, then add a few drops of cooking oil.

A macro lens such as the Nikon 60mm f/2.8 is a good example of what to use to produce these mouth-watering shots.



STEP 1

Fill your glass

Place the tumbler on some coloured pieces of paper. With your camera on a tripod, frame up and focus manually with a macro lens. Use Live View and zoom in on the screen to get your focus point spot-on. Light the tumbler from the side with a torch.



STEP 2

Drink in the detail

Use Aperture Priority mode, and dial in a medium aperture of f/11. Adjust the position of the torch to vary the contrast and colour intensity; to recompose, slide the background paper and glass as one. This is much easier than moving the camera.

SIGMA



Eric painting his Mona Lisa with Coffee and Ink | Taken with the SIGMA sd Quattro H + SIGMA 50mm F1.4 DG HSM | Art



SIGMA sd Quattro H

One of the reasons I have come to love the Sigma cameras is their ease of use and quality of the end result. No matter if I am out in the mountains with all my toys and the easy to carry dp0 Quattro, or in the studio with the sd Quattro H, I can always rely on them to deliver amazing results. The Sigma system offers incredible images for still life photographers, picking up every detail in my coffee paintings, to the vast landscapes Eric finds himself in, it truly is a camera system worth shouting about!



Darryll Jones

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Project 4 Freeze a flower

Encase a flower in ice and you have the perfect subject for some ultra-cool pictures!



COVER the base of an ice-cream container with about 2cm of water and pop it in the freezer. Once it's

solid, place a colourful flower on the ice, and add enough water to cover it. Freeze it again, and the end result will be a flower encased in a block of ice.

Remove the frozen block from the carton, place it on a draining board, and set up your camera on a tripod. Use a torch to light the ice from different angles, and you'll quickly find a number of highly textured, colourful compositions.

Project 5 Icy windscreen textures

Grab your camera rather than the scraper when your car windscreen is frozen



OVERNIGHT temperatures start to drop below freezing this time of year, and moisture in the air

will form a plethora of icy patterns and textures on car windscreens.

A kit lens is perfectly good for this project, but to get some contrast, try different heights and angles. Shoot in raw format, and use Aperture Priority with a setting of f/11.

When you convert the raw file, reduce Shadows and Blacks to accentuate contrast, and pull back Temperature to get a cool, blue feel.



Project 6 Make a splash

Get advertising-style shots on a shoestring



TO get a classic studio still-life without a studio, tape a white pillowcase to a wall and kitchen worktop so it forms a scoop. With your camera on a tripod, frame up on a tumbler

of water with a lemon slice. Stay level with the glass, but leave some headroom for the splash. Place an off-camera flash to one side – but point it at the background, not the glass.



STEP 1

Dial in your camera settings

Set your flash to fire remotely in its TTL mode. Using the Aperture Priority setting on the camera (A or Av), dial in an aperture of f/11. Use Exposure Compensation to add +1.0 stop of overexposure, and fire off a test shot to ensure the background is white. Adjust Exposure Compensation until it is.



STEP 2

Get your timing right

Grab some ice cubes and drop them into the glass from just out of frame. Fire the camera as they strike the surface and you'll record some great splashes, frozen by the flash. It's easier if you have a remote release, but not essential. Experiment with different drop heights until you have a great result.

Project 7

Capture a spark of life

Record an arty shot of a moment the eye can't detect



WHEN a match is struck, it flares into life so quickly that we can't actually observe what happens at the

precise moment of ignition. But by shooting a rapid burst of shots at high frame rate, we can record this amazing moment and get a shot that straddles the divide between art and science. You need a macro lens to record it, but leave plenty of room around the match head when you compose, as the fiery flare is bigger than you'd think!



STEP 1

Place a match in a blob of Blu-tack and put a dark background behind it. Use Manual Focus and Live View, and focus on the head of the match.



STEP 2

Switch to Manual mode (M) and adjust ISO to 200. Dial in an aperture of f/5.6 and a shutter speed of 1/100 sec. Set your highest drive speed.



STEP 3

Strike another match, and start shooting as you use it to light your subject. Pull it out of the way as soon as the subject starts to flare.



STEP 4

Check your shots on screen: in the sequence, you'll have captured the moment of ignition and a streak of fire flaring from the match head!

Project 8

Light with a candle

Inject extra atmosphere into your portraits with a flickering flame



IT may be feeble in illuminating power, but candle light punches way above its luminosity in terms of atmosphere. To shoot a candlelit portrait, use Manual (M) mode and raw format. Include the candle in the shot, as the light is so warm that the

light source is needed to help the viewer understand the image. Use an ISO of 1,600 and a fast lens like a 50mm f/1.8 at an aperture of f/2. Set a shutter speed of 1/100 sec, and focus on the nearer eye of your subject.



Project 9

Sculpt with smoke

Freeze the movement of wisps of smoke



CAPTURING wisps of smoke is easy to achieve if you can get the lighting right. To get the shot, light an incense stick and place it in front of a dark background. Use an off-camera flashgun in its Manual mode to light it from one

side, making sure that the light doesn't spill onto the backdrop or the lens. Focus on the tip of the stick, then switch to manual focus to lock the focus distance.

Use Manual mode, and set an aperture of f/8 and a shutter speed of 1/200 sec. Now take some test shots, and adjust the flash power to make the smoke brighter or darker, until you have the perfect exposure.



TOP KIT

Off-camera flash

Using an accessory flashgun off-camera opens up loads of opportunities for creative lighting effects. It's easy to do, and many cameras now have built-in modes that fire compatible flashguns wirelessly. If your model doesn't offer this, all you need to do is purchase some wireless flash triggers.

Place the transmitter in the camera's hotshoe, mount the flash on the receiver unit, and you're all set to go. You can use any make or model of flash in its Manual mode with this setup, so you're not restricted to a specific brand.





Project 10

Smartphone graffiti

Paint light sculptures with your mobile device



THE small LED light on a smartphone is perfect for creating light traces.

With a little practice, you can draw any shape in the air by shooting a long exposure. Wear dark clothing and keep moving, and you won't appear in the shot. To set up the camera, use Manual mode and pre-focus manually on the area where you're going to do your painting. A good starting point is ISO 100, f/16 and a shutter speed of 30 seconds.

Project 11

Swing a torch

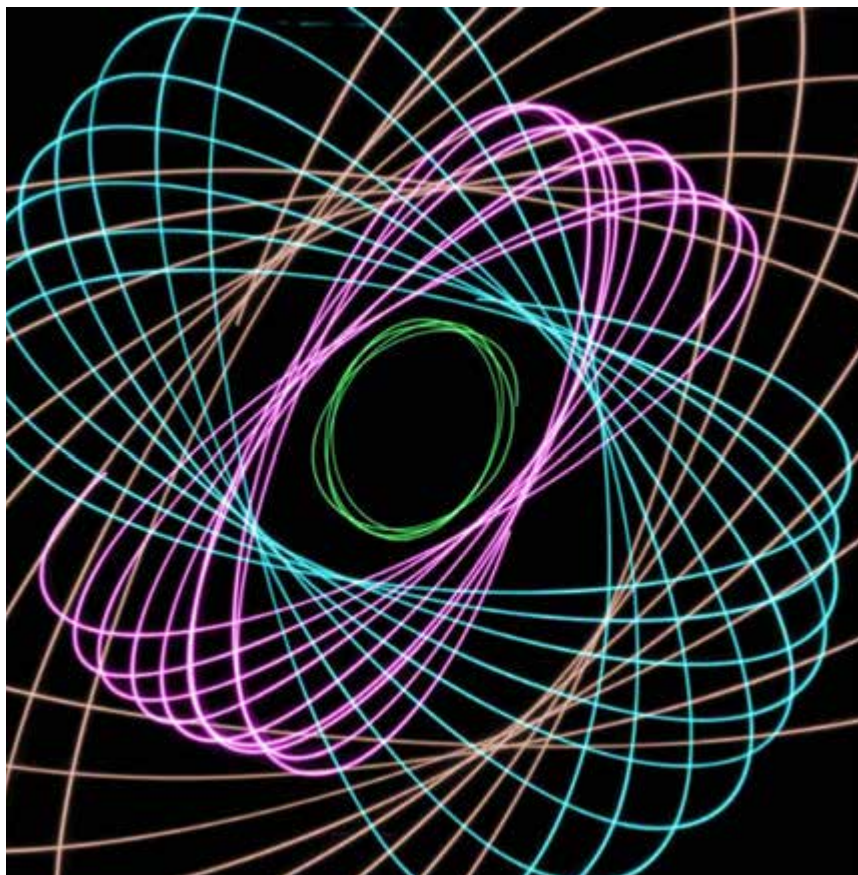
Record beautiful patterns with a dancing flashlight



IT'S easy to make a fascinating image that captures the laws of physics! In a dark room, attach a metre of string to a light fitting and tie on the torch, and set up your camera on a tripod beneath

it. Focus manually on the torch, and set the camera to Manual mode (M) with an ISO of 100, an aperture of f/11 and a shutter speed of 30 sec. Switch off the room lights, then swing the torch in a circular motion so it starts orbiting in an ever-decreasing ellipse. Fire the camera shutter, and stand back until it closes.

To get multiple ellipses in one frame, use the Bulb setting and cover the lens with black card between torch swings. To change the torch colour, place clear sweet wrappers over the bulb.



SIGMA

Image: Karl Holtby | Shot on the Sigma sd Quattro H



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Project 12

Paint with light

Trace a subject with torchlight streaks to create a head-turning image



MOVE a small light source within the frame during a long exposure, and you will record **ethereal streaks of light**. You can trace around a subject with a torch to outline it, light it from different angles with the torch beam, or even move coloured string lights behind it for an

amazing background.

For more complex paintings using multiple light traces, you can stack and blend your shots together in Photoshop. We'll cover this in next month's Photoshop Masterclass, but let's first reveal how to set up and shoot your own light paintings.



STEP 1

Set up your camera

Place your camera on a tripod, then frame up and focus on your subject. Now switch to Manual Focus to lock off the focusing distance, and set the mode to Manual (M). Dial in an ISO of 200, a shutter speed of 8 sec, and an aperture of f/16. Set the Self Timer to 5 sec. You can now switch off the lights.



STEP 2

Paint with light

Fire the camera, get into position, and when the shutter opens you have the duration of the shutter speed to make your light painting. You can dial in a longer exposure if needed – just keep the torch moving all the time to avoid hotspots. You can paint a whole subject in one long take, or can split the work into separate shots and blend them together.





BACK TO BASICS

TECH MADE EASY



THIS MONTH: IN-CAMERA PROCESSING

What options are available for adjusting the look of your photos?

Q **UITE a lot of things happen very quickly when you press the shutter release button on your camera.** The light

reflected off the subject is captured by the lens and fed to the image sensor, where it's recorded as an analogue electrical signal then turned into digital data by the analogue/digital converter.

All of this typically happens in a fraction of a second, but it's really just the start of the process of creating an image. Before the file ends up being temporarily stored in the camera's buffer prior to being written to the memory card, the massive amount

of data created for each image you shoot has to be crunched. Digital processing that's carried out at this stage includes adjustment of the white balance, colours and contrast, along with lens corrections, noise reduction and sharpening. How – or rather when – these adjustments are applied depends on the file format selected on the camera. In the case of JPEGs or TIFFs, they're applied to the image before it's finally compressed to create a smaller file size (in the case of a JPEG) and saved to the memory card. If you're recording images as raw files, the processing data is saved as part of the file but not applied.

At this stage, a raw file is not an image at all: rather it's a data file that contains the raw binary code from the camera's image sensor. To convert this information into a viewable image format such as a JPEG, the raw data first needs to be decoded. This is normally done using raw processing >

To convert this image, the raw data needs to be decoded

AUTOMATIC or MANUAL?

When should you get involved with making adjustments?

THERE are many situations where it pays to roll up your sleeves (or take off your gloves, at least) and dive into your camera's menu to fine-tune the image processing options.

Leaving everything in the automatic and 'standard' settings will work up to a point, but when lighting conditions get

tricky or you just want to try a creative treatment, there's no substitute for a bit of manual intervention.

Some of the default settings can be an acquired taste too. For example, you might find that your camera has what's known broadly as a 'lighting optimiser'. Look for the ALO (Auto Lighting

Optimizer) option on Canon cameras or D-Lighting on Nikon. These modes are designed to expand the dynamic range by revealing more detail in shadow areas without losing detail in the highlights. You may find that out of the box, the effect is too strong, in which case you can tone it down or switch it off entirely.



1

White balance

Leaving this in Auto mode can deliver strange results under artificial light or in cloudy conditions. Instead, choose a preset or dial in a 'K' value to remove a colour cast – or to add one for creative effect.



ORIGINAL IMAGE



5

Picture style/control

Your camera will have a range of picture processing presets, including Landscape (above), Portrait and Monochrome. These offer different mixes of saturation, tone and sharpness, although they can be tweaked.



2

Lighting optimiser

The camera will 'push' the shadows to reveal more detail, but this can lead to increased noise in these areas.



3

Distortion correction

It's worth activating this for Live View shooting, as you'll be able to see if areas near the edge of the frame will be cropped when corrected.



4

Colour space

You'll have a choice of sRGB or Adobe RGB colour spaces. Stick with sRGB if you'll be sharing your JPEGs online.

RAW vs JPEG

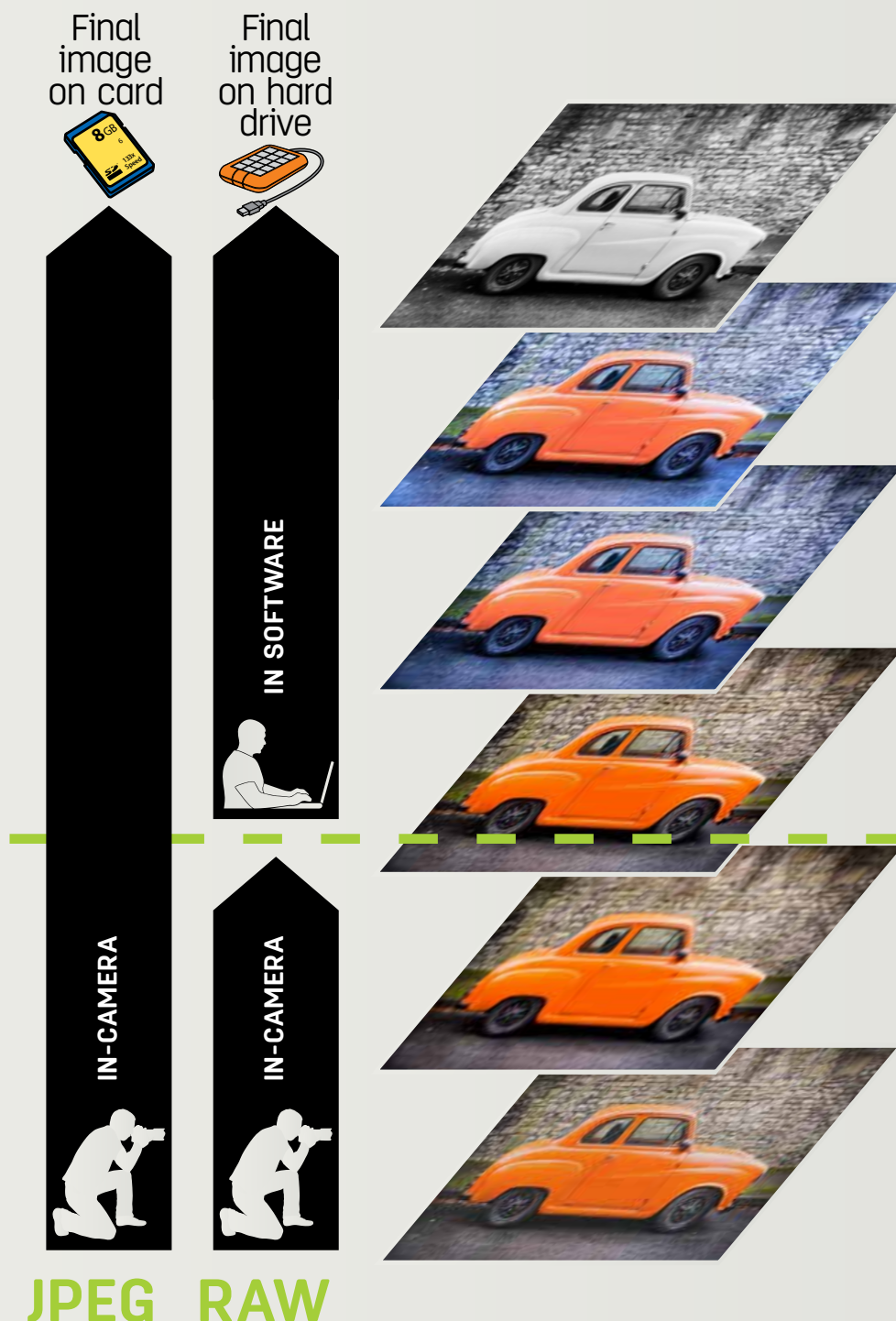
Which settings matter when it comes to recording raw files?

A RAW file is often referred to as a digital negative, as it enables you to produce a range of different JPEG 'prints' while leaving the original image untouched. There are some aspects you have to get right in-camera when recording in raw, but in terms of image processing, you could leave

everything set to automatic and just fine-tune the result later in software if you so wish. As highlighted earlier, there are some creative and technical reasons why you might not want to do this.

Getting it right in-camera can also save you time later. When you open a raw file in your camera's proprietary

raw software, such as Canon's Digital Photo Professional or Nikon's Capture NX-D, it's initially decoded according to the image processing data that's been saved as part of the raw file, so it will be displayed with the white balance, picture style and other settings dialled in on the camera at the time it was taken.



6

Picture style

Change the look of an image – although bear in mind that the effect is 'baked' into a JPEG.

5

Lens corrections

Remove aberrations and dark corners. Software options are better than in-camera ones.

4

White balance

Although this is locked in on a JPEG, you can still remove colour casts in Photoshop.

3

Noise reduction

You can adjust the strength of this setting, but the results may not be obvious on the camera.

2

Focusing

In most instances, you can't change the point of focus once the shot has been taken.

1

Exposure

Aperture, shutter speed and ISO are fixed at the time of shooting.

Taking image processing to the next level

ALTHOUGH there are many processing parameters that can be changed after the event with a raw file – and in some cases fine-tuned even with a JPEG – the fundamental exposure settings of aperture, shutter speed and ISO, along with the focus distance, are fixed at the point that a photo is taken. In recent years, camera manufacturers have started to turn this idea on its head.

Founded in 2006, California-based Lytro released its first 'light field' camera in 2012. This device enabled an image to be refocused after it had been shot. While an intriguing idea on paper, the first camera was hampered by cost, very low-res images and quirky handling.

The Lytro Illum (right) followed in 2014, offering a bigger zoom and an articulated screen, although at 4MP, the processed JPEGs are still small.

GOING MAINSTREAM

Lytro might be viewed as a novelty, but mainstream manufacturers are also experimenting with this idea. Take Canon, whose Dual Pixel RAW file format introduced on the EOS 5D Mark IV enables the focus to be shifted very slightly (we're talking eyelashes to eyeball in a portrait) after the shot has been taken.



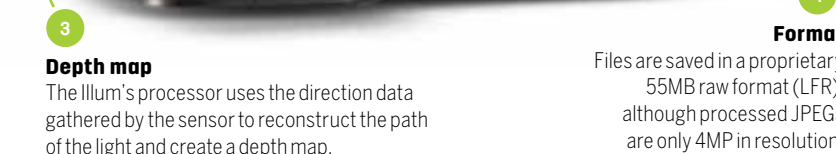
Lytro Illum

This camera lets you refocus shots in the supplied software.



Image capture

The 35-250mm equivalent, fixed f/2.0 lens feeds a 1/1.2in CMOS sensor that records 40 'megarays' of information.



3

Depth map

The Illum's processor uses the direction data gathered by the sensor to reconstruct the path of the light and create a depth map.

4

Format

Files are saved in a proprietary 55MB raw format (LFR), although processed JPEGs are only 4MP in resolution.

software on a computer, but some cameras enable you to convert a raw file stored on the memory card too. In fact, all images start out as raw image data; it's just that in the case of a JPEG or a TIFF, the camera automatically carries out the image adjustments for you.

Why bother altering settings when a raw file lets you do it later?

So, why would you bother altering settings like white balance and sharpness in the camera when raw files let you do it later in the comfort of your own home?

Well, for a start you'll probably want a more accurate preview of the image. The image you see displayed on the rear screen of a DSLR during playback and Live View, and in the viewfinder of a camera equipped with an electronic viewfinder, is actually a JPEG preview that's based on the image processing settings made on the camera.

This is the case even if you shoot raw, although the file that ultimately ends up on the memory card still contains all that raw sensor information.

This JPEG preview is a useful creative tool. For instance, you can get a feel for how an image will stack up in black and white, while still recording the colour data in the raw file that can be used for a more sophisticated mono conversion later.

There are also technical considerations: the exposure histogram you see on the camera's screen is based on the JPEG preview, and will reflect any changes you make to the picture style or white balance. You're unlikely to get an accurate reflection of the raw file if you have a devil-may-care approach to in-camera image processing.

NEXT MONTH

Get to grips with a range of useful lens adapters

IMAGE ANALYSIS

WHY SHOTS WORK

AIRPLANE WINDOW

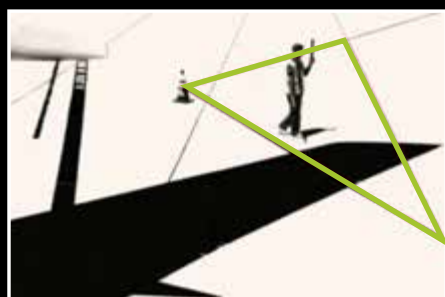
NAME: Sarolta Gyoker

LOCATION: San Diego

KIT: Sony Alpha 6000 with
E PZ 16-50mm f/3.5-5.6
OSS lens

EXPOSURE: 1/160 sec at f/13, ISO 100

WEBSITE: facebook.com/sarolta



Lining it up

When angled and intersecting lines are found in a composition, they can convey movement and add tension. Out of her airplane window, Sarolta noticed that “the interplay between part of the wing, its shadow, the fellow, and the lines on the tarmac were intriguing”. The lines form a frame around the air marshal and draw the viewer’s eye towards him.

Sarolta Gyoker

Emphasising editing

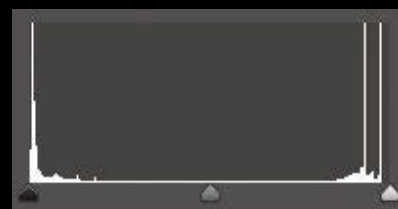
Sarolta processed this image in Camera Raw, converting it to black and white and adding a slight tint. By removing colour information, darkening the Blacks and upping the Clarity, the tonal range has become even more reduced, making the shot more graphic, and so the viewer’s eye is less distracted. “I edited the shot to emphasise the semi-abstracted interplay between the elements,” she says.





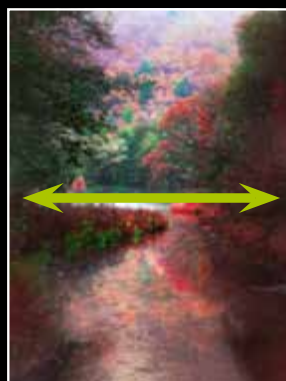
Go graphic

Sarolta's shot of the airport runway is abstract rather than realistic, as it includes minimal colour, shape and texture. This approach leaves the meaning of the image open to the viewer. "I have always been drawn to abstraction and paring away, and this view appeared too delightful to miss," she says. Without the symbolism of colour information, Sarolta's image is more open to interpretation.



VIEW OF RIVER

NAME:	Mevludin Sejmenovic
LOCATION:	Bosnia river, Sarajevo
KIT:	Nikon D610 with Nikon AF-S Zoom-Nikkor 24-70mm f/2.8G ED
EXPOSURE:	1/30 sec at f/16, ISO 250
WEBSITE:	500px.com/sejmenovic mevludin



Serene sight

When Mevludin encountered this beautiful scene, he wanted to recreate the sense of tranquillity in his image. "There was an interesting natural frame, with the forest on the both sides, and the mountain above," he says. "I positioned the river in the middle for a calm and natural composition." The angle of lines can greatly influence the mood of the image. Here, the subtle horizon line is the centre, which quietly delivers an impression of calm and space.



Painterly quality

The bold colours and open composition in this shot are reminiscent of Impressionist painting. Impressionistic works recreated the artist's general feeling of a scene, and that's exactly what Mevludin wanted to do here. Because there's a lack of definite focal point and detail, his photo has a soft, dreamy, quality, supported by the emphasis on colours over lines.

Bold colour balance

Autumn is known for its rich, red hues, and Mevludin has edited this scene in Photoshop to make these tones even more prominent. "I partially enhanced the red channel (Color Channel Mixer R)," he says. By also lightening the river in the middle of the scene and the green trees on either side, he has created a natural path for you to gently follow.

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METEORA WITH STARS

NAME:	Vadim Sherbakov
LOCATION:	Meteora, Greece
KIT:	Canon EOS 6D with Tokina AT-X 11-20mm f/2.8 Pro DX lens
EXPOSURE:	A composite of various shutter settings (see below)
WEBSITE:	vadimsherbakov.com



Cool composite

As star trail images are a composite photo of many shots, Vadim had to choose his settings carefully. He used Photoshop to combine three exposures of the background and over 100 of the stars. "During sunset and the 'blue hour', I used ISO 100, f/8 and shutter speeds from 1/50 sec to 2 seconds. But for the star shooting, it was ISO 3,200, f/2.8 and 20 seconds," he explains. The wide aperture and high ISO enabled him to reach a faster shutter speed [20 seconds] and avoid star movement.

In it together

Vadim's image has a mystical atmosphere. He has juxtaposed an expansive landscape with a manmade structure protruding from nature, with the ethereal stars as they 'leave' earth. The use of a wide-angle focal length of 15mm enabled Vadim to capture all of these elements in the same frame.



On orientation

This image works because it presents a unique view of a very well-known location. Here, Vadim chose to shoot the viewpoint vertically "not only to include more stars, but because there are fewer vertical images from this famous area. I wanted to include a few rock formations and the surrounding forest but also emphasise the great monastery," he says. The horizon has been placed in the middle of the frame as a bold compositional device with the monastery positioned on an intersecting line in the bottom-right third of the frame.



Vadim Sherbakov



Upgrading your kit doesn't have to cost a fortune

Building a kit for photography can be very expensive, with the costs of high-end DSLRs, telephoto lenses and essential camera accessories all adding up. Don't let this put you off though - there are ways to minimise the cost of expanding and upgrading your setup.

Forget new, go 'like new'

Buying new may seem appealing, but it isn't necessary. You can save massively by purchasing a second-hand camera in excellent condition, with hardly any signs of use.

There are several options for where to buy used gear. Peer-to-peer sales on auction sites and online classified marketplaces sometimes offer attractive prices, however, the anonymity of these sites make them risky options that can lead to issues and further expenses down the road. In addition, there is also a possibility that items aren't always as described.

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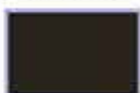
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SHOOTOUT

74 Camouflage and converters to bump up the lens length helped two readers to track the elusive red stags on our photo safari in Exmoor



80

PHOTO ANSWERS

Want to try wildlife photography? Need to know when to use a long or a short exposure? Give Andrew James a call



86

ASSIGNMENT

Our 'Explore Light and Land' challenge winners really have excelled themselves – their images make quite the collection



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WILD EXMOOR

This issue, **Ben Brain** takes a 4x4 trek across Exmoor's iconic open moorland with two readers who are passionate about wildlife photography. Who will come out on top in the battle of the big guns?

READER 1



*Sean
Savage*

CAMERA: Nikon D810

LOCATION: Barnsley, South Yorkshire

HATS off to Sean, who made the 4.5-hour trip from South Yorkshire to Somerset the night before, and slept in his car to make the 7am start time! Sean is a bathroom designer by trade, but has been bitten by the wildlife photography bug after picking up his first DSLR

around three years ago. He would recommend joining a local photography club to gain valuable tips and hints, and says that joining Barnsley Photo Club helped him to gain a better understanding of photography. More importantly, it got him out taking photos...

READER 2



*Jayne
Bond*

CAMERA: Canon EOS 1D-X Mark II

LOCATION: Poole, Dorset

RESPECT to Jayne too, who made an early start from Poole so that we could catch first light.

Jayne worked in mainstream secondary education for over 30 years, initially as a teacher of Art & Design before becoming a Senior Assistant Headteacher, but she took

early retirement four years ago to enable her to focus full-time on photography and art.

Jayne has achieved her Licentiate status from the RPS and is a member of the British Photography Awards Ambassadors scheme.
www.jaynebondphotography.co.uk

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CHALLENGE 1

Capture a shot of a red deer stag

SHOT OF THE DAY



Kit Nikon D810 with Nikon 600mm f/4 lens Exposure 1/1,250 sec at f/4, ISO 400



Sean

A LITTLE local knowledge goes a long way when it comes to finding wild animals. We enlisted the help of Andrew Turner, who runs the aptly named Red Stag Safari tours on Exmoor. He got us into the right spots

to catch the early-morning light, although Sean was surprised at just how wild the deer were. "They're extremely difficult to photograph, as they have a vast area to roam freely, and once disturbed they will disappear from sight. To achieve this shot, we parked 3/4 mile away and used a treeline and a dry stone wall to hide our approach. I had only a split-second to take my shot as the stag looked straight at me before he turned and ran off."

Expert opinion

- Sean's made the most of this brief encounter: it has a real caught-in-the-wild quality.
- The sombre tones and earthy colours are highly evocative.
- While there's an argument for shooting an image like this in portrait format, the space provides a sense of place.

Your good stealth

Our guide Andrew provided some useful tips for making our approach. Top of the list were raising our hoods to break up our outline, approaching with the wind in our faces so our scent wouldn't be carried towards the deer, and moving in single file. You can see how effectively Andrew's camouflage coat breaks up his outline compared to Sean's green jacket too.



TOP TIP



Kit Canon EOS 1D-X Mk II with Canon 500mm f/4 IS II lens plus Canon 1.4x Mk III extender **Exposure** 1/500 sec at f/5.6, ISO 800



Jayne

WE spotted these deer from a distance early in the morning and parked at a suitable vantage point on the roadside verge. "We had to move cautiously as the slightest movement would cause the deer to be spooked, so it was quite a challenge finding a good vantage point," explains Jayne. "It was

important to stay well hidden behind the hedgerow, but I didn't want the foliage to create a distraction in the frame. As they were some distance from the roadside, I attached my 1.4x extender to my 500mm lens, giving me a focal length of 700mm.

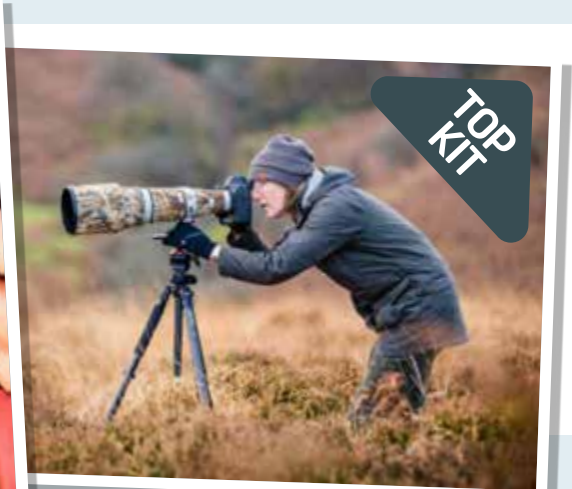
"The stag moved back and forth through the group of hinds and then, as the stag moved to one side, the hinds gathered in a compact group. It was a clear vision of dominance over his harem, with no other stags around to cause a threat."

Expert opinion

- Jayne's made up for a lack of focal length by successfully framing a shot that tells a story.
- The light and palette give the image a painterly quality.
- We find the way that the hinds' sharp pricked-up ears and the stag's antlers contrast with the soft grass very pleasing.

Roll out the (big) barrels

During the day, Jayne used her 500mm f/4 and x1.4 converter combo, while Sean wielded a 600mm f/4. Ben was packing Sigma's 150-600mm f/5-6.3 | C zoom. The built-in stabilisers were useful for shooting from the vehicle (with the engine off to kill vibrations) while the focus limiters were switched to their longest settings to minimise the 'hunting' the AF systems had to do to find the subjects.



Shoot a portrait of 'wild Exmoor'



Kit Nikon D810 with Nikon 600mm f/4 lens Exposure 1/1,000 sec at f/4, ISO 200



Sean

ALTHOUGH red deer were our priority, we didn't waste chance encounters with other wildlife.

Andrew spotted this accommodating buzzard as he eased his Discovery around Exmoor's snaking backroads in the morning light – and it was perfectly placed for the photographers sat on the

left of the vehicle (Sean and Ben). "Buzzards are notoriously difficult to get close to, as they have fantastic eyesight and are always aware of their surroundings," says Sean. "But in this instance, the car made the perfect hide. If I had got out of the car, the bird would certainly have flown off."

"Stopping 200 yards short of the buzzard, I carefully rested my large lens on the window, which had already been partially opened, for additional support. I waited until he looked straight at us before taking the shot."

Expert opinion

- The quality of the light lends the shot a lovely mood.
- Sean has done well to get a sharp picture – the bird wasn't still for long each time it landed.
- The timing is excellent too, with the curve of the beak and the catchlight in the eyes giving this particular frame an edge.

On the road again

As Sean mentions above, a vehicle makes a great mobile hide – and it provides a great platform for scouring the scenery. Andrew explained that he's taken some of his best shots from just sitting and waiting for the animals to come to him, rather than getting out and trying to get close, so having the window half-down and a camera ready is key.





Kit Canon EOS 1D-X Mk II with Canon 500mm f/4 IS II lens Exposure 1/320 sec at f/4, ISO 100



Jayne

WHILE looking for red deer, we came across a large group of Highland cattle roaming the moors. They were quite approachable, although we still watched each other's backs. "They're such charismatic animals with their long coat and shaggy fringe – perfect for a portrait shot," says Jayne. "The light was quite dull, but at midday this

was somewhat of an advantage, with no distracting harsh shadows. I wandered around the moorland quite a bit as the cattle were fairly spread out, but this Highlander caught my attention with its golden colour blending into the grass – exactly the type of portrait that I wanted to achieve.

"I really enjoy shooting low-level. Using the 500mm lens meant that as well as keeping a sensible distance, I could use f/4 to achieve a shallow depth of field. This created a soft mushy foreground, with just enough in-focus grass to echo the shaggy fringe."

Expert opinion

- This classic portrait ticks all the technical and technique boxes.
- Jayne has successfully captured the autumn mood with her careful colour selection.
- It could benefit from a slightly tighter crop to reframe the cow a little to the right.

NEXT MONTH

Part one of a north-east odyssey

Space, man

Some animals need more space than others, and you'll get closer to them if there's a wall or hedge between you and them. We saw one photographer enter a 'no go' area, but all he did was spook the deer...



Red Stag Safari



Thanks to Andrew Turner at Red Stag Safari for his expert guidance during the day. Visit the website

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Long or short?

Q When should you take a long-exposure water image – and when shouldn't you take one?

Alison Trent

A **THERE is no hard and fast rule as far as I am aware, Alison.** You simply make a creative choice. I know that long-exposure images that render water as a soft haze aren't to everyone's tastes, but their popularity is something that has grown with the advent of digital photography and the ability to see results almost instantly. I enjoy seeing a well-executed long exposure: it can turn a scene into something extra special.

To really try to answer your question, I think you have to consider how shooting the same scene at a fast or a slow exposure will change the appearance and mood of the resulting photo. A long exposure, which for me is anything longer than you can handhold without high risk of camera shake, has a more peaceful feeling about it.

If you look at the two shots here of the same scene, you can see what I mean. The long exposure of 30 seconds makes the sea feel calm and tranquil – but as you can see from the shorter-exposure image of 1/60 sec, it was anything but. The change in mood and drama between the two is quite distinct. In the short exposure, the sea seems powerful and even a little threatening.



LONG EXPOSURE
With the help of an ND grad filter and a tripod, this long exposure makes the sea feel more ethereal and calm.



SHORT EXPOSURE
A short exposure freezes the action and captures the brute force of a wave hitting the rocks of the shore.



Whenever you make a creative choice like this, it's worth thinking about the outcome, and what the different possible exposures would bring to the outcome. It's also worth remembering that the

longer the exposure, the more the water will blur; so if you want to retain some detail in waves, it's worth experimenting with the length of your exposures to find the right balance.

Seven ways to shoot... Travel portraits

Tips to help you take solid shots when time is of the essence

1 Approach is everything

It's natural to be shy of approaching people you meet on your travels, but friendly, upfront interaction really does pay dividends.

2 Be prepared

Once you have someone willing to be photographed, don't start fumbling around for your camera. You need to be ready and to have thought about how you are going to photograph them before they've even said yes. A delay can allow them to change their minds.

3 Get close

This doesn't mean you should invade their personal space, but the best portraits are generally frame-fillers where you've cropped in reasonably tight for a feeling of intimacy with the subject.

4 Ask them to move

If they're happy to be photographed, moving them slightly for a better background – to include something of interest in

the environment or into better light – is useful. Don't expect them to follow you down the street, but shifting a yard or two in a given direction can make a big difference.

5 Use the right focal length

You can use anything from 35 to 200mm for good travel portraits, but a 50-85mm focal length is great for portraiture. If you have a fast prime f/2.8 lens, you can achieve some pleasing drop-off in sharpness too.

6 Photograph people doing something

If you meet craftsmen and -women on your travels, letting them do their work while you shoot can result in some very natural images, and will often buy you extra time to work on composition and lighting.

7 Eyes are crucial

Direct eye contact can give a portrait real impact. Remember that the eyes need to be sharp, especially if you are shooting with wide apertures.



Travel with a lens that lets you get in closer to your subject without invading their personal space.

Dark matters

Q My images are all darker than I'd like, even though I use Aperture Priority. What could I be doing wrong?

David Jubb

A **THIS is something that catches a lot of people out, David, but it's easily fixed.** Working in Aperture Priority is fine. You are choosing two parts of the 'exposure triangle', setting the ISO you want then, in the case of Aperture Priority, the aperture. The camera is doing its bit by taking the meter reading and suggesting the shutter speed that will give you a correct exposure. In many situations, the resulting exposure is perfect for a



well-exposed image – but, as you are also discovering, that's not always the case.

Depending on the metering mode – and for general use I'd suggest Evaluative/Matrix for an average reading across the scene – the camera is fooled by light or dark areas. It doesn't know which part of the scene should take priority. However, you do. You can choose to override your camera's exposure, using exposure compensation to either lighten or darken the scene to your tastes and subject.



To show you what I mean, take a look at my shaggy sheep photos. I grabbed the first image quickly but didn't dial in any exposure compensation. Because there is quite a lot of lighter sea behind the subject, the camera didn't expose the darker sheep correctly. I could see this in on the LCD and in the Histogram, so I simply dialed in +1 1/3 exposure compensation to allow more detail on the sheep without burning out the sea in the background.

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Wild and wide

Q I am learning the ropes of wildlife photography. My Nikon 70-300mm zoom lens is invaluable; should I get a longer telephoto lens or a wide-angle next?

Gregor Hamilton

A I LOVE it when people ask me to spend their money for them – but I do so with the caveat that it's really a personal choice on the type of imagery you want to capture. You've already discovered that having a long lens is essential when it comes to wildlife: in many cases, wildlife doesn't want to come close to you, so you need a way of reaching it optically. A long lens also helps you to separate your subject from its background so that it stands out.

So do you need longer? If you are finding that a lot of your subjects are still too far away and you are cropping a lot, maybe you do. That said, I find a 300mm is perfect for lots of wildlife situations; and as you are still learning, for now I'd opt for a wider zoom option.

I'd suggest something like the Nikon 16-85mm f/3.5-5.6G, which gives you a focal range of 24-127.5mm on a crop sensor camera. Shots that include more of the environment are too often overlooked in wildlife photography.

A wide-angle zoom lens like the Nikon 16-85mm helps you include more of the environment in your shots, bringing a narrative element to wildlife shots.



Tethered tricks

Q I'd like to shoot tethered using Lightroom. Do I need any specialist equipment to do this?

Colin Horn

A THE process of tethered shooting with Lightroom is fairly simple, Colin. The only piece of essential equipment you need is the cable that acts as the bridge between the camera and computer. I don't know the intended distance between your computer and your camera, but I would opt for a cable that provides this link easily. For example, I use a 15ft cable from Tether Tools (www.tether_tools.com) in my studio.

The cable type depends on your camera. With a Canon 1200D, for example, you would want a USB 2.0 Mini-B 5-Pin cable; models such as the 5D Mk IV use a USB 3.0 SuperSpeed Micro B cable.

Once you have the cable, it's easy to set up. Plug the cable into the A/V Out Digital socket on the side of the camera and the USB end into the computer, and Lightroom should pick this up. You just need to select File > Tethered Capture > Start Tethered Capture. Lightroom will ask you where you want to save the images, and you can name the folder what you want. Then you can start shooting away.

Each image you shoot will now be automatically loaded into Lightroom. It's



great for still-life images and portraits as you can make lighting adjustments based on the supersized preview and even develop the image in Lightroom between frames if needed. If you are using a laptop, you can obviously do this on location too.

As a word of warning, I find tethered capture in Lightroom to sometimes be a bit temperamental. One moment you can be happily shooting away, the next moment Lightroom has lost the connection. However, when it works seamlessly it's a great way of shooting and well worth trying out.

QUICK Q&A

Smartphone stability

Q I want to use my iPhone on a tripod. Any ideas what I can use?

Sue Pool

A Take a look at the SideKick 360 Smartphone Adapter from MeFoto. I've got one that travels with me everywhere for exactly the reasons you mention. It's a well-constructed piece of kit that holds your smartphone in portrait or landscape format; and as the name suggests, it can be rotated 360 degrees thanks to its little ball head, so you can position it any way you want. It can be fixed onto most tripods and is exceptionally simple to lock in place.

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Before

1 TOO DARK
A Grad Filter on the sky adds more detail and mood.

2 CONTRAST
Improve contrast using the Contrast, Clarity and Dehaze sliders.

3 DODGE AND BURN
Adjustment Brushes will lighten and darken some areas.



After

OUR starting image has lots of detail in it thanks to the overcast conditions – but that in turn has meant it lacks contrast, and that sky looks rather insipid. However, it has all the ingredients I need to create an interesting black-and-white photo, with the foreground grass, the shapes of the huts and the potentially moody sky beyond.

First of all I press V to turn the colour image to black-and-white. I can easily improve the contrast by pushing the Contrast slider to +30 and adding +11 on the Clarity slider. I can also go to the Effects panel and take the Dehaze slider to +25. This will boost the overall contrast and brings some of that sky detail back.

Now I can drop a Graduated Filter over the sky and darken it with the Exposure slider until it balances with the rest of the image. Finally, using several Adjustment Brushes I can do some localised 'dodging and burning' to bring out the monochrome mood even more.

MOODY MONO

A nondescript colour shot can become an enticing black-and-white with simple steps

QUICK Q&A

Speed is the way

Q I'm about to have a go shooting speedway. Any tips?

Keith Hooper

A IT'S great fun, Keith! Like all

action photography, you need to keep the shutter speed high and, depending on lighting, you'll need to be prepared to push the ISO up to help you get exposures of 1/1,000 sec or faster to freeze the action. If your camera allows, use a small group of active AF points at the centre of the camera and shoot on Continuous, then keep tracking your subject.

You'll need a telephoto lens of around 200mm to get tight compositions. Try to show depth by focusing on the front rider with others behind dropping out of focus. Remember that dirt flies off the bikes and can hit the camera lens!



Frame game

Q Where could I use the frame-within-a-frame technique for composition?

Harry Rodes

A ANYWHERE, Harry! It doesn't matter what the genre or subject is: the concept of placing the main subject within some sort of natural or contrived frame within the wider framework of your shooting ratio is a good way to lead the viewer's eye to where you want them to look.

A frame within a frame can be subtle, such as out-of-focus foliage in the foreground, or it can be something a bit more obvious, like a doorway, a window or a passageway. When you start looking about, you'll be surprised how many opportunities you'll find to use this incredibly useful compositional tool.



Creating frames within a frame is a great way of directing the viewer's eye. Here it also builds a strong sense of depth.

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ASSIGNMENT

Enjoy the top three winners and the crowd vote winner of our 'Explore Light and Land' photo challenge...

ASSIGNMENT is our challenge to you to take the most creative and arresting shot around a theme, and share it with the online community at Photocrowd (www.photocrowd.com). The best entries receive a judges' critique, with a great prize for the overall winner. The Crowd Vote winner also wins a bookazine.

Your mission in issue 195 was to capture landscapes in interesting light. Over 4,000 fantastic entries explored different light, with the following winners doing something a little special, in the judges' opinion...



Could you be our Photographer of the Year? You can find all of the entry details on page 24

ABOUT THE WINNER'S PRIZE

Henrik Spranz wins the Lowepro Photo Hatchback BP 250 AW II daypack worth £99.

It's a 22-litre pack that can swallow an SLR with an attached lens, plus two lenses and accessories in its built-in camera compartment. Remove this, and the



pack converts to a full daypack. The hatchback design gives peace of mind, as your camera gear can't be accessed while you're wearing the pack, while the CradleFit™ tablet pocket and built-in All Weather AW Cover™ provide protection. www.lowepro.co.uk





CROWD
VOTE

CROWD VOTE

ERIKA VALKOVICOVA

Chosen by Photocrowd voters.

Kit Canon EOS 5DS R with 16-35mm f/2.8 lens

Exposure 10 sec at f/2.8, ISO 2,000

1 HENRIK SPRANZ There's an enchanting quality to the light in this magical forest scene. Henrik has handled the high-key tones with skill, capturing just enough detail in the ice-covered branches. The result is a beautifully atmospheric image that really does capture a wonderful sense of space and light. The clever use of in-camera multiple exposure was inspired, and Henrik has done well to master this creative technique without making it too obvious what he was up to.

Kit Canon EOS 5D Mk III with 70-200mm f/4 lens

Exposure 1/125 sec at f/9, ISO 100

2 ARTUR SZCZESZEK The bold and simple composition works a treat in Artur's stunning image. The calm tranquillity rendered by the long exposure contrasts spectacularly well with the harsh sharpness of the lightning bolt and the storm clouds. Together, these elements create a scene loaded with drama and tension. It's great to see a fresh interpretation of this much-photographed structure. Well done, Artur.

Kit Nikon D7100

Exposure 85 sec at f/16, ISO 100

3 DAVID HOPLEY Everyone loves a good 'lone tree' shot, but this takes the notion to dizzy new heights, thanks in part to David's canny use of a drone. The refreshing point of view that a drone can facilitate opens up whole new worlds of creativity, allowing for images like this to be captured. The vista has been well-seen and realised in this shot. The hard-raking light helps to create wonderful graphic shadows and shapes on the crisp green grass.

Kit DJI FC550 with 15mm f/1.7 lens

Exposure 1/160 sec at f/4, ISO 100



3



Above — Survivors

Brent usually shoots at 1/250 sec to sync with his flash set-up, but this aerial view required a faster exposure.

An aerial photograph of a vast herd of wildebeest in a dry, golden-brown savanna landscape. The animals are densely packed in some areas, moving across the terrain. The lighting is warm, suggesting late afternoon or early morning. The overall scene conveys a sense of the scale and movement of a major wildlife migration.

INTERVIEW

BRENT STIRTON

*He's one of the most widely published photojournalists and the overall Wildlife Photographer of the Year 2017. Brent Stirton speaks to **Keith Wilson** about patience, diplomacy and taking a wide-angle view*



B

RENT Stirton is a hard man to track down. For at least nine months of the year, he is away on assignment in some of the world's most volatile locations, where he documents issues ranging from the illegal wildlife trade to tribal conflicts and human rights abuses.

When we speak, he is on a rare two-week break at his Californian home after several months away in Mongolia, Somalia and the Peruvian Amazon. Even then, Brent Stirton doesn't get many days of complete rest: my call is one of six he's taking this morning. "That's not unusual," he says. "When I come back, there are usually a few days of chaos."

Studying journalism in South Africa, what were your hopes and dreams?

I was in the South African military, and South Africa was going through

tremendous turmoil at that time. I went from wanting to become a doctor to wanting to become a journalist, just because I thought there was a great misunderstanding over the role of geopolitics over things like apartheid and the Angolan conflict; and also, our communication with each other within the country was so poor at that time that I didn't think we understood each other as a nation.

When are you talking about?

This is the 1980s, man. This is 1985, 1986, around that time.

When you went for journalism, did you have photography in mind?

No, not at all. I was doing my course but I was paying for my course at the same time, so I was freelancing for as many [places] as I could – Reuters among others. A lot of the press in South

Africa told me: "We like what you're writing, but we need photographs."

At the time, I was covering a lot of the factional violence in the country. There was a lot of conflict between the ANC and different so-called liberation groups, some of which were more aligned with the government. Anyway, the bottom line was I couldn't find a photographer to work with, so I bought a second-hand camera and spent the next year teaching myself how to use it.

What became your first published photo story?

Kangaroo courts in KwaZulu-Natal. Basically, peoples' courts where people would be judged by the locals and then either killed or released, based on what was happening in the politics at the time. It was published in a few South African magazines at the time; Reuters also carried it as a story.



BRENT STIRTON

Photojournalist

BRENT Stirton's graphic images of human adversity, tribal conflict and wildlife poaching have been published widely on the pages of *National Geographic*, *Time*, *Geo*, *Le Monde*, *Vanity Fair*, *The New York Times Magazine* and *The Sunday Times Magazine*. His accolades include nine World Press Photo awards and 10 Picture of the Year International prizes.

NAMED Wildlife Photojournalist of the Year three years in a row by London's Natural History Museum as part of the Wildlife Photographer of the Year contest. Brent has also just been dubbed Grand Title winner in the 2017 competition for his image 'Memorial to a Species'. It was also named winner of the Wildlife Photojournalist Award: Story.

Brent Stirton / Wildlife Photographer of the Year

You live in the US now. Was leaving South Africa a personal or professional decision, or both?

You know, honestly, it's quite hard to work internationally out of South Africa. The people who have those positions are very protective of them.

Second, there's certain people you really should be in front of... if you're going to try to work for *National Geographic*, for example, it's important that you see them on a regular basis. There are just too many other photographers trying to get that work, so you do need to build relationships.

Third, South Africa is... It's a little bit too close to my heart in the sense that there's so many things happening in South Africa that are devastating and

Top left —

The spoils of war
Much of Brent's time is spent gaining the trust of his subject – in this case, a defector from the Lord's Resistance Army in Africa.

Above top —

Weighing up the value
An assistant vet holds the horns of a rhino shortly after they had been removed.

Above —

The real cost
For a photo story about rhino horn poaching, Brent needed a subject that symbolised what was at stake.

just plain wrong, things that deserve to be covered well journalistically. If I stayed there, I think I would have been very South African-centric, and I just wanted to have a larger experience. That's what happens: you've got to make a choice, but you don't get to have both.

You've put yourself at the sharp end of documenting social and environmental stories, and have to be discreet. How do you work?

It depends on which aspect of a story I'm working on. I need to do things quickly, so I take a fair amount of lighting with me on a lot of jobs. There's a lot of lit portraiture, which I like to think I've evolved to a point where it contributes to a documentary narrative.



“I try to be as honest as I can be, 99 per cent of the time. One per cent of the time I dress up or I’m in disguise”

Right — Ivory Trash

In April 2012, for his award-winning *God’s Ivory* photo essay, Brent travelled to Bouba Ndjida National Park in northern Cameroon, where the largest mass killing of elephants had taken place just weeks before. Here, close to the border with Chad and the Central African Republic, a group of over 100 ivory poachers armed with AK47s, grenades and machine guns rode into the park on horseback and killed over 650 elephants over a two-month period. 340 carcasses had been located by the time Brent arrived. This shows a ranger examining the corpses.



Top left —

In the firing line

Brent portrays his subjects ‘in a way that is above and beyond just a normal snap

Middle left —

Ivory haul

Brent uses flash to deliver consistent lighting. Here, flash illuminates a container of ivory confiscated in Togo.

Bottom left —

From tooth to totem

Although Brent says he ‘lives’ between 28mm and 35mm, some confined scenes required Brent to shoot much wider.

I also have plenty of aspects in some of my stories where I just take one small camera. I use a Canon M5 a lot of the time because it just looks like a tourist’s camera, but it gives me a professional file.

For a lot of my work, the photography is the easy part. Finding out what is actually happening and getting to the point where I can take a picture, that’s hard. That requires a great deal of diplomacy and I need to be very patient.

You’re widely travelled – is that why you keep your camera kit to a minimum?

Yes, I tend to just use the Canon EOS 5D Mk IV and the 5DS R, the Canon EF 24-70mm f/2.8L II USM and EF



Brent Stirton / Wildlife Photographer of the Year

35mm f/1.4L II USM; and that is basically it. I shoot 99 per cent of my pictures with those two.

That's what I notice about your work: it's very much the wide-angle view, even when close up. I'm trying to veer towards the 35mm stuff more and more. A lot of the scenes we need to shoot something a bit wider, but 28mm to 35mm is where I live.

What are the main reasons for using flash in the field? The thing is, I get asked to do a story that takes in six to seven countries in the space of five weeks. That's what the modern reality is for a lot of *National Geographic* stories, so you

don't have time to wait around for perfect light.

A lot of the people I photograph are remarkable people, and I want to make celebrities of them, in a sense. I want to photograph them in such a way that is above and beyond just a normal snap, and lighting is one of the ways I can get there quickly.

Who has inspired you? There's a lot of talent out there. I think most photojournalists who know what they're talking about will talk about James Nachtwey. There's no question of his legacy and his influence.

I think for me Nick Nichols has been very important. Nick opened up a whole new world for me:

I came from conventional photojournalism to a much more environmentally crafted way of thinking, and Nick opened that up to me, no question.

I really like the work of Nadav Kander. I like Steven Klein in the fashion world. I think Annie Leibovitz, whether you like her or not, is probably the most important living portraitist, and there's a great deal to be gained from looking at her work. So, the classics for me really. There's a reason those people are the clichés – their influence is real and palpable.

A photojournalist I know asked me to put this question to you: "I would like to know how he gets



Brent Stirton / Wildlife Photographer of the Year

“These days my rule is to try not to be away for more than six weeks at a time”

away with it. What does he tell people?”

I try to be as honest as I can be, 99 per cent of the time. One per cent of the time I am in disguise or I will dress up as someone who is not a photographer, or make a very clear attempt not to be a journalist, but that’s when I’m dealing with people who are clearly breaking the law. They’re criminals, and you’re not going to be able to photograph them or their activities without... You can’t go in as a journalist.

But 99 per cent of the case I’m just trying to have a discussion where I go, “Look, you have a perspective, you have your own point of view. Let me represent that point of view because I’m not here to take one picture, I’m here to create an essay, something that provokes discussion, so let me represent your point of view.” I believe in that. That’s where we’re supposed to be as journalists as well – an objective profession.

A photographer once told me the hardest part about his job was leaving home, because he might be away for six months. Is that the same for you?

It sucks, man. Listen, that guy had the incredible luxury of six-month assignments; we have the luxury of six-week assignments.

There’s that aspect to it, but when you know you’re going away for six months, bring your wife out. Most of those guys aren’t doing jobs that are so dangerous they can’t bring their family with them at some point, you know? These days my rule is to try not to be away for more than six weeks at a time. Even if I come home for

Above — Lion Guardians

Here, two Masai Lion Guardians use telemetry technology to track collared lions in Amboseli National Park, Kenya.

three or four days, I get to see my wife. A lot of us get caught up in this notion that this is a noble profession, and our spouses and our kids should understand that. Well, I have a reality check for those who think like that: it’s bullshit, it’s not real. If they’ve committed to being in your life, you owe them something for that. Set a limit on the time you spend away from your family or your friends, otherwise you’re going to lose them.

www.brentstirton.com

NEXT MONTH

The animal photography of Tim Flach

About Wildlife Photographer of the Year

Wildlife Photographer of the Year is developed and produced by the Natural History Museum, London, UK.

EXHIBITION INFORMATION

The exhibition is open at the Natural History Museum until Spring 2018. Opening times are 10.00-17.50; last admission, 17.15.

TO BOOK TICKETS

Visit www.nhm.ac.uk/wpy
Prices from: Adult £14.00*, child and concession £8*, Free for NHM members, patrons and children under four.

Visitor enquiries: 020 7942 5000
Nearest tube: South Kensington

* Online booking prices include optional Gift Aid donation to the Museum.

2018 COMPETITION

The next Wildlife Photographer of the Year competition, #WPY54, will be open for entries from 23 October to 14 December 2017. Visit the Natural History Museum website for entry information.

www.nhm.ac.uk/visit/wpy/competition.html



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Jason Lanier, Shot using a NEO 2

"The NEO 2 is going to revolutionise how people use light, and eliminate the need for external flash" – Jason Lanier, Sony Artisan of Imagery and award-winning photographer.



Peter Muller, Shot using a NEO 2

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THE PERIMETER



ADVENTURE AWAITS

Quintin Lake encounters unexpected obstacles among the grand vista of the UK's north-west coast

WALKING along the prom at Grange-over-Sands, a retired couple share a gentle laugh. "That shortbread was too sweet really – I couldn't have eaten a second one."

Approaching Ulverston I try my luck following a disused railway line, as it represents a major shortcut – but unfortunately it ends up in a slate depot next to a large farm that is securely razor-wired. Feeling like a trespasser, I'm about to accept defeat and backtrack 6km when I notice a rung of the gate has rusted through, meaning I can just slip through if I take my pack and camera off and post them through the gap before me.

At Devonshire Docks, where the nuclear submarines are built in Barrow-in-Furness docks, I'm expecting to encounter security guards while taking photos, but I don't expect such a legally balanced if nonsensical response. "We can't stop you taking photographs, but this is a sensitive area, and you've been reported taking photographs."

Strangeness ensues leaving Barrow: a WWII pill box upended, the ground it once stood on having eroded away.



Bagging a baguette on the route between Ulverston and Barrow.

Further along at Lowsy Point, a collection of esoteric wooden huts includes one built around an old ship, prow and stern sticking out proudly on either side.

From here on, tremendous walking and landscapes unfold. The full undulating panorama of the Lakeland fells spreads out before me, and I can make out the twin peaks of Scafell and Scafell Pike in the distance. There is no path as such on this stretch – just a case of following the best route in the intertidal zone which, combined with the dramatic landscape and absence of people, gives this section a deliciously adventurous feel.

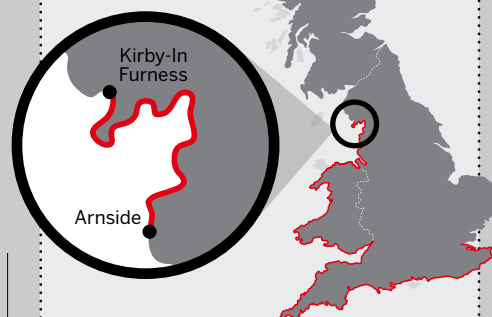
As darkness falls, adventure becomes frustration, and I'm caught in a labyrinth of marshy wet channels and tall reeds. A finger post points tauntingly to an inky black channel of water glimmering in my torch beam. I'm soaked to the waist,



Quintin Lake

THIS MONTH'S ROUTE

Arnside to Kirkby-In Furness



5 days, 74 miles
Cumulative distance: 2,641 miles

exhausted and swearing profusely. I eventually accept the path I'm trying to follow must have been set out decades ago, when the marsh was in a completely different state. I backtrack wearily and find an easier route further inland.

Waiting at the train station is always a reflective moment as I transition back to the interior world, with sore feet and a mind full of landscapes. Boarding the train, existential thoughts evaporate, as I realise the farm smell I'd noticed over the last few hours is in fact me.

CECIL
BEATON

The life and times of a sharp-tongued but hugely creative portrait and fashion photographer

CECIL Beaton was one of the great portrait and fashion photographers of the 20th century. Attracted to elegance, glamour and style, his creative talents extended to costume and set design on stage and screen, as well as painting and illustration. His influence has extended to many other major photographers, including David Bailey and John Swannell.

What was his background?

Beaton was born in Hampstead, London, in 1904, the eldest son of a wealthy timber merchant. He began taking photographs as a child, encouraged into the activity by his nanny, and developed his talents further at Cambridge University.

Beaton had photographs published by *Vogue* while still a student. He left before finishing his course and began working for *Vogue* in 1926. Beaton loved beauty and glamour, and his early subjects included the wealthy and bohemian 'bright young things' of the 1930s.

How did his photographic career develop from there?

He worked as a staff photographer at different times for *Vogue*, *Vanity Fair* and *Harper's Bazaar*. The majority of his portraits featured major international figures in the arts, particularly actors, artists, dancers and models. He's also well-known for his royal portraits. His first was a portrait of Queen Elizabeth, later the Queen Mother, in 1939; others included Queen Elizabeth II's official coronation portrait in 1953.

What was he like as a person?

Art historian and museum curator Sir Roy Strong, a friend of Beaton's,



The Cecil Beaton Studio Archive at Sotheby's



The Cecil Beaton Studio Archive at Sotheby's



Imperial War Museums (IB1398)



Collection of Frederick R. Koch

Clockwise from top left New York, 1930s/40s; Barbara Streisand, 1969; Royal Indian Naval Station, Calcutta, 1944; Cecil Beaton by George Hoyningen-Heune.

described him as "vain, ambitious and sometimes vitriolic". Beaton's unexpurgated diaries, published in 2003, revealed a snobbish and opinionated personality. Comments about his sitters, in his diaries and elsewhere, were often venomous. He described actress Katharine Hepburn as "a raddled, rash-ridden, freckled, burnt, mottled, bleached and wizened piece of decaying matter"; while Elizabeth Taylor was "a thick great revolving mass of femininity in its rawest."

How did he approach photographing World War II?

He was prolific, shooting over 7,000 images between 1940-45 – mostly a mixture of posed portraits and images of bomb damage. His most famous war image showed three-year-old Blitz victim Eileen Dunne, sitting in a hospital bed with a bandage around her head. It was shown on the cover of *Life* magazine in September 1940 and helped to influence American public opinion about joining the war.

What film and theatre work did he do?

He was an accomplished set and costume

designer. He won Oscars for his costume design on the films *Gigi* (1958) and *My Fair Lady* (1964) as well as four Tony Awards for his work on Broadway productions.

What did he do in his later years?

Knighted in 1972, Beaton had a stroke two years later that left him paralysed on his right side and greatly limited his ability to work. To ensure his income, he auctioned most of his archive in 1976. He died in 1980.

Why is Beaton in the news?

A new book, *Love, Cecil: A Journey with Cecil Beaton*, by Lisa Immordino Vreeland, has just been published. It's a primarily visual journey through Beaton's prolific creative life, illustrated with his photographs, contact sheets, drawings and scrapbooks and complemented with his personal quotes. It's published by Abrams, price £40. abramsbooks.com



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shooting
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FUJIFILM X-E3

Fujifilm squeezes its newest sensor into its smallest X-mount body. See how it does



106

CANON EOS M100

Aimed at smartphone upgraders, this simple camera boasts excellent results



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ADOBE PHOTOGRAPHY PLAN

Lightroom 2018 has moved to the Creative Cloud. We test it, and Photoshop CC 2018



110

EIGHT BEGINNERS' CAMERAS

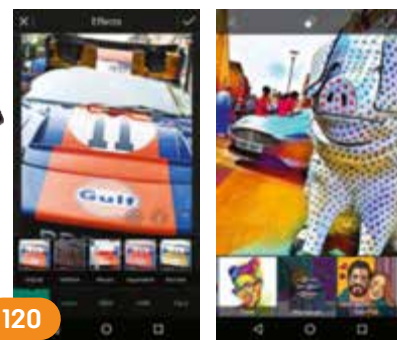
Is an SLR still best for new photographers? We take an in-depth look at the top options



118

MESSENGER BAGS

Need a new kit bag? We've found six that look great and are practical, too



120

MOBILE PHOTO EDITING APPS

With a wealth of free image editing apps out there, we pick out the best of the pack

Reviews you can trust

Digital Camera is brought to you by the UK's most experienced team of photography journalists, which means you can trust everything you read, and compare kit with confidence.

We believe that the best way to test a photography product is to use it as it was intended. Our real-world testing involves taking equipment on a proper shoot – whether outdoors or in the studio – and using it exactly as you would, to let you know if it's fit for

purpose. Scientific data won't tell you everything, but it's a great way to make comparisons and sense-check our real-world conclusions. So we have a series of controlled tests for cameras and lenses that deliver objective benchmarks. You can download the high-resolution test images and resolution charts we shoot from www.digitalcameraworld.com. This means you can check the quality yourself and even run your own tests.

Scores explained

Each of our tests scores out of five in one or more sub-categories; then we award an overall mark out of five. *Digital Camera* is 100% independent – and never swayed by advertisers. The tests you read are our genuine, unbiased opinions. Our company has a strict code of conduct on testing – the most rigorous of any photo magazine.

★★★★★

Forget it

★★★★☆

Below average

★★★☆☆

Good for the price

★★★★☆

Very good all round

★★★★★

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Given to products that receive five stars overall



Given to products that are innovative & groundbreaking



Given to products that merit very special attention



CSC www.fujifilm.co.uk

Fujifilm X-E3

£1,250/\$1,300

Fujifilm squeezes its latest sensor into its smallest X-mount camera – with some great results



SPECIFICATIONS

Sensor — 24.3MP APS-C X-Trans CMOS
Memory — SD/SDHC/SDXC
Viewfinder — EVF, 2,360k dots
Max video resolution — UHD at 30, 25, 24fps
ISO range — 200-12,800, expandable to 100-51,200
Autofocus points — 325-point hybrid contrast/phase detection
Max Burst rate — 14fps (21 raw)
Screen — 3in touchscreen, 1,040k dots
Weight — 337g
Dimensions — 121 x 74 x 43mm
Connectivity — Wi-Fi, Bluetooth LE
Max image size — 6,000 x 4,000
Metering zones — 256
Video 4K — UHD at 30, 25, 24fps
Image processor — X Processor Pro

Fujifilm's latest X-Processor Pro engine is roughly four times faster than the previous model's



THE X-E3 is Fujifilm's latest compact enthusiast level rangefinder-style camera. We had an idea it would be coming because the previous X-E2 was the only X-mount camera yet to get the company's latest 24.3-megapixel X-Trans sensor.

The X-E3 is a smaller, cheaper and lighter alternative to the X-Pro2, in the same way that the DSLR-style X-T20 is a smaller and more affordable version of the X-T2. It has an electronic viewfinder, positioned in the top-left corner of the camera body rather than in a housing on the top plate. This gives the X-E3 a smaller, neater shape.

The AF system combines an array of fast phase-detection autofocus points covering 50% of the width of the frame and 75% of the height, combined with a wider array of contrast autofocus points. You can choose between three different AF options: Single Point AF; Zone AF, for capturing

1 The 18-55mm f/2.8-4.0 kit zoom feels a little big on the X-E3's compact body.

2 The rear screen is touch-sensitive, and supports touch-focus and touch-shutter modes as well.

3 The control dials are effective, but they also have a 'click' action, and it's a little too easy to click the rear dial when you only wanted to spin it.

4 With a shutter speed dial on the top and aperture control on the lens itself, this feels like an old-fashioned film camera.

subjects within a larger area; and Wide/Tracking AF, which follows them around the frame. Five different continuous autofocus configurations cope with different kinds of subject movement.

Fujifilm's latest X-Processor Pro processing engine is roughly four times faster than the previous model's, and gives increased buffer memory during continuous shooting. The X-E3 is not specifically designed as an action/sports camera, but it can shoot at up to 8fps. It can also shoot 4K video using Fujifilm's trademark Film Simulation modes.

Build and handling

The X-E3 is a lot slimmer and smaller than a DSLR. Fitting Fujifilm's 18-55mm f/2.8-4.0 kit lens, however, makes it feel slightly unbalanced, which is a common problem with compact mirrorless cameras – we were also supplied with a smaller 23mm f/2 prime lens, which feels a much better match.

The controls require quite a mind-shift from a regular camera's. In classic camera style, there's a shutter



speed dial on the top and an aperture control ring on the lens. You set the shutter speed dial to 'A' for Aperture Priority operation or the aperture to 'A' for Shutter Priority; and you set both to 'A' for Program AE mode. For fully manual operation, you set the shutter speed dial and aperture ring to the settings you want.

The aperture control varies from lens to lens. On the 18-55mm kit lens, for example, there's a switch for automatic and manual aperture setting and an unmarked ring for changing the aperture. The 23mm lens has an aperture ring with marked values and click stops.

There's no external control for the ISO setting, and it's a little fiddly to access it via the interactive Q menu on the rear screen, although you can customise the Fn button on the top of the camera for ISO adjustment.

Performance

The electronic viewfinder is sharp, bright and responsive. You don't

1

Resolution

The 24.3MP X-Trans sensor and the 18-55mm kit lens have captured razor-sharp detail in the leaves in the foreground of this shot.

2

Colour rendition

Fujifilm's Provia film simulation mode has delivered rich, natural-looking colours with a pleasing warmth in this autumnal urban scene.

3

Dynamic range

The exposure meter has got this shot exactly right, and the X-E3's excellent dynamic range has captured great detail in the shadows and highlights.

Meet the rivals

The cameras taking on the Fujifilm X-E3...

FOR FURTHER
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Canon EOS M5

£969/\$1,049

Canon's only mirrorless camera with an EVF is small and neat and captures good images, but it lacks the retro style and controls that make the Fujifilm X-E3 such a joy to use.

Reviewed: Issue 188

★★★★★



Olympus PEN-F

£1,099/\$1,199 (US price: body only)

The PEN-F is a beautiful camera, every bit as appealing as the X-E3. The smaller 20MP sensor may put some folk off, but does mean smaller lenses.

Reviewed: Issue 178

★★★★★



Sony Alpha 6000

£469/\$548

Twice replaced with newer variants, the 24MP A6000 nevertheless still stands up well even now, with great resolution and features – and at today's prices, it's an absolute steal.

Reviewed: Issue 155

★★★★★



Shot at ISO 25,600, this picture shows remarkable saturation, contrast and clarity and is a great result from an APS-C sensor.



Fujifilm X-mount cameras apply distortion and aberration correction internally – not just to JPEGs but to raw files too.

notice any real 'lagginess' until the conditions are so dark that it's hard to make out your subject well with the naked eye. The autofocus system is similarly snappy, locking on to its subject quickly and positively; it's just as impressive in low light as the EVF.

The image quality is equally impressive. Image detail is clear, sharp and crisp, and the colours are vivid but natural-looking. You can choose the image style using Fujifilm's Film Simulation modes, of course – Velvia gives the richest and most intense colours, Classic Chrome gives a more muted film-like look, and ACROS produces nicely toned black and white.

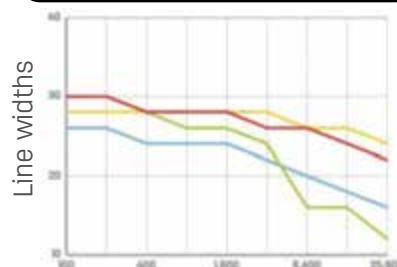
Fujifilm cameras use digital lens corrections that are 'baked' into the raw files too, so both JPEGs and raw files show no discernible distortion or chromatic aberration.

Even the high-ISO results are impressive, despite the 50% increase in pixel density compared to the 16-megapixel X-E2, which should have a negative impact. Shots taken at ISO 25,600 – one step into the camera's 'expanded' ISO range – show visible noise, some smoothing and detail loss up close, but from normal viewing distances they retain an impressive clarity, contrast and depth of colour.

Rod Lawton

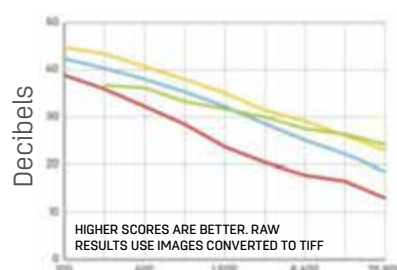
Fujifilm X-E3 Canon M5
Olympus PEN-F Sony A6000

RESOLUTION



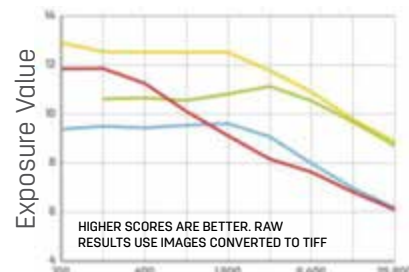
In this group, the Sony A6000 just pips the X-E3 for resolution but the X-E3 slips ahead at higher ISO settings.

RAW SIGNAL-TO-NOISE RATIO



Fujifilm's noise control is excellent, and here the X-E3 beats the EOS M5, Olympus PEN-F and Sony A6000 convincingly.

RAW DYNAMIC RANGE



It's the same story with dynamic range, where the X-E3 leads the rest by some margin, confirming the results from our real-world testing.

WE SAY...

The X-E3's minimalist 'rangefinder' styling and traditional external controls are welcome departure from regular camera design. It's compact and responsive, and its image quality is first-rate.

VERDICT

FEATURES	★★★★★
BUILD & HANDLING	★★★★★
PERFORMANCE	★★★★★
VALUE	★★★★★
OVERALL	★★★★★

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CSC www.canon.com

Canon EOS M100

£569/\$599 (with 15-45mm lens)

There's simple, and there's simplistic. Has Canon taken this baby mirrorless camera just a step too far?

SPECIFICATIONS

Sensor — 24.2MP APS-C
Dual Pixel CMOS AF
Memory — SD/SDHC/SDXC (UHS-I)
Viewfinder — No
Max video resolution —
1,920 x 1,080 at 60, 50, 30, 25, 24fps
ISO range — 100-25,600
Autofocus points — 49
Max Burst rate — 6.1fps (21 raw)
Screen — 3-inch tilting
touchscreen, 1,040k dots
Weight — 302g
Dimensions — 108 x 67 x 35mm
Max image size — 6,000 x 4,000
Connectivity — Wi-Fi, Bluetooth, NFC
Image processor — Digid 7
Metering zones — 384



THE new entry-level camera in Canon's mirrorless EOS M range packs in

Canon's latest 24-megapixel Dual Pixel CMOS AF sensor for high-speed autofocus, high resolution and first-rate images. It also boasts a full set of PASM exposure modes and a tilting touchscreen display.

This camera is not really designed for enthusiasts and experts, but for bloggers, vloggers, Instagrammers and fashionistas who've outgrown their smartphones. The 180-degree rotating rear screen with automatic selfie mode activation is one clue; the three body colours and array of bright 'Face Jackets' are another. Ours has a silver and tan body and a custard-yellow jacket.

Build and handling

The Face Jacket looks striking and saves the base of the camera from being scratched if you place it on rough surfaces, but it doesn't add much to the handling, and you have to take it off to get to the battery and memory card doors.

The build quality is OK, but has the distinctly plasticky feel

1

The M100 has a neat minimalist look. It is available in three body covers and with a variety of brightly coloured Face Jackets.

2

The rear touchscreen display flips upwards through 180 degrees for selfies and is handy for low-angle shots. It doesn't offer any downward tilt, though.

3

There's no viewfinder, but there is a pop-up flash activated by a button on the side of the camera.

4

From the top the M100 looks more like a Canon PowerShot than a mirrorless camera. There's no mode dial, just an auto/manual/movie mode lever.

we've noticed in Canon's low-end DSLR models. Perhaps the biggest problem is that the small body doesn't give you much to get hold of.

Canon has also super-simplified the external controls: there's no mode dial, only a full auto mode, manual mode (in that you can then dip into the menus to choose the mode you want) and movie mode. Everything else is controlled through the touchscreen display, which is fine if you like to shoot on auto but less fine if you want to take over the settings.

Performance

The EOS M100 may not be stellar to use, but the pictures are great. The sharpness, dynamic range and noise performance is just as impressive as Canon's mid-range/enthusiast DSLR cameras. The Dual Pixel CMOS AF is fast, smooth and quiet too – at least in good light. In dim indoor lighting it can slow up considerably and start to hunt around a lot more.

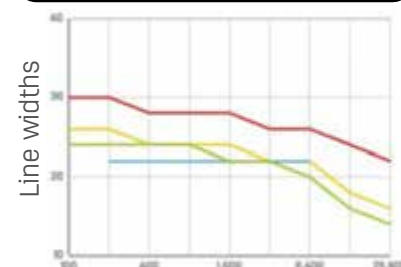
The small body and Canon's retractable 15-45mm kit lens make it easy to forget this is a proper APS-C camera; anyone upgrading from a smartphone will be blown away by the pictures. But the M100 has been made so small and so simple that it's a little trickier to use than we'd like.

Rod Lawton

The M100 has been made so small and so simple that it's a little trickier to use than we'd like

■ Canon M100
 ■ Fujifilm X-A10
 ■ Olympus E-PL8
 ■ Sony A6000

RESOLUTION



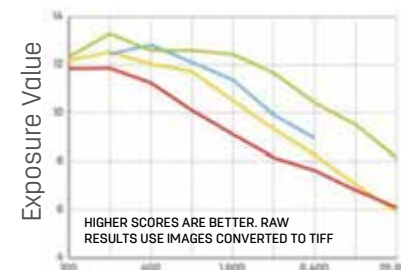
We tested the EOS M100 against three similarly-priced rivals. The older Sony Alpha 6000 offered the best resolution.

RAW SIGNAL-TO-NOISE RATIO



The EOS M100's noise scores are very good, narrowly beating the Fujifilm X-A10 despite having a higher-resolution sensor.

RAW DYNAMIC RANGE



It's a close-run thing at low-to-medium ISO settings, but the Olympus pulls ahead for dynamic range at higher ISO settings.

WE SAY...

The EOS M100 feels like a great sensor and processing system wrapped up in a cut-price body. It's certainly compact, but is a little awkward to handle and relies very heavily on its menus and touchscreen interface for even the most ordinary adjustments. Shame.

VERDICT

FEATURES ★★★★★

BUILD & HANDLING ★★★★★

PERFORMANCE ★★★★★

VALUE ★★★★★

OVERALL ★★★★★



1

Exposure

This shot is perfectly exposed despite the high-contrast lighting, so the EOS M100 is pretty foolproof for beginners.

2

Detail rendition

The M100 doesn't deliver the highest resolution we've seen in a 24-megapixel model, but it's sharper than 16MP rivals.

3

Dynamic range

Canon's Dual Pixel CMOS AF sensor delivers good dynamic range, with detail in both shadows and highlights.

Meet the rivals

The cameras taking on the Canon EOS M100...

FOR FURTHER EXPERT CAMERA REVIEWS, VISIT digitalcameraworld.com



Fujifilm X-A10
£399/\$499

Fujifilm's budget mirrorless model captures rich colour and contrast but its 16-50mm kit lens is bulky and at 16MP it falls a little short of the M100's 24MP.

Reviewed: Page 113

★★★★★



Olympus E-PL8
£549/\$649

Pitched squarely at the same fashion-conscious market as the M100, the E-PL8 looks beautiful and takes great pictures but has 16MP not 24MP.

Reviewed: Page 114

★★★★★



Sony Alpha 6000
£519/\$648

It's not aimed at the same smartphone upgraders as the EOS M100 but it's in the same price bracket. Despite its age, the A6000 is in a different class.

Reviewed: Issue 155

★★★★★

SOFTWARE www.adobe.com

Lightroom & Photoshop CC 2018

Adobe has its head in the clouds as it introduces a whole new way of working

1

CLOUD STORAGE

You can store your images locally if you want, but the real home for your photos in Lightroom CC is in the cloud on Adobe's servers.

1

2

SIMPLER ORGANISING

There's no Folders panel, just Albums, plus folders to organise them in. There are no Smart Albums, either.

2

3

STRIPPED BACK EDITING TOOLS

Some tools are missing, notably Tone Curve, Split Toning and Camera Calibration, but the rest are arranged in a super-streamlined new layout.

4

NEW VIEWS

In addition to a regular square thumbnail grid, Lightroom now offers an attractive gapless Photo Grid mode.

ALL YOUR IMAGES ONLINE!

But you'll need to pay extra for the online storage space



Adobe Lightroom CC

It's Lightroom CC, but not as we know it, with a smart new interface and cloud-based storage



LIGHTROOM CC 2018 is a bold move for Adobe.

Cloud synchronising is possible in the old Lightroom, but only with selected Collections. With the 'new' Lightroom CC, all your photos are uploaded to Adobe's online storage. This is going to require quite a lot of cloud storage capacity, so Adobe has introduced 1TB storage to its Photography Plans.

Lightroom CC's new interface might also prove controversial, although it looks terrific. The organisational system is simpler, and the editing tools have a more straightforward layout.

Some tools and features are missing, though, including the Tone Curve tool. The Library and Develop modules have been merged into a single neat interface, but the Map, Book, Slideshow, Print and Web modules are gone.

However, Adobe's new Sensei machine-learning search system is a revelation. It can find images according to the objects they contain and it works brilliantly, although it needs an active internet connection to function.

WE SAY: We'd like to see Lightroom CC get the full power of the Classic version, but this is a terrific start.

OVERALL

★★★★★

Lightroom Classic

Prefer the old Lightroom? It's now Lightroom Classic

Lightroom CC may have full cloud storage, but Lightroom Classic is the one with the most editing power, and is still the best bet for those with a large image catalogue.

WE SAY: The new colour and luminance range masking is a great addition to a program that's already first-rate.

OVERALL

★★★★★

REGULAR DESKTOP PLAN

You can still carry on storing your files on your computer



Digital Camera
★★★★★
GOLD AWARD

Lightroom Mobile

Makes your smart device a powerful editing tool

You can carry out many proper Lightroom editing tasks on your mobile device, and your changes will be synchronised everywhere, and with its DNG raw capture it becomes a decent camera too.

WE SAY: Free with Photography Plans, the Lightroom mobile app has serious power and potential.

OVERALL

★★★★★

EDIT YOUR IMAGES ANYWHERE!

Your mobile device is smarter than you think



Digital Camera
★★★★★
GOLD AWARD



Adobe Photoshop CC

The world's favourite image editor gets a modest refresh



NO BIG CHANGES FOR PHOTOSHOP!

But better selections, masking tools and paths

BEGINNERS often worry that Photoshop is too complicated.

Experienced Photoshop users would probably argue with that, but Adobe's nevertheless trying to reassure novices with a new Learn panel that walks you through basic image-editing operations. New 'rich' tooltips that appear when you hover the mouse over a tool will also help; some of these feature animated GIFs to show how the tool works.

Other new features include improvements to the Select And Mask tool to make selections more accurate and realistic, and an improved Refine Edge Brush tool for cleaning up tricky edges. Alternatively, if you want to cut out an object with a clear, curved outline, the new Curvature Pen tool could make this a whole lot easier.

Also new is the ability to cut and paste layers within and between

1 BETTER SELECTIONS

The Select And Mask tool has been improved, as has the Refine Brush, making Photoshop even better at tricky selections and outlines.

2 LEARN PHOTOSHOP

A new Learn Photoshop panel together with 'rich' tooltips – some with animations – makes it easier to get started.

documents, and the ability to edit 360-degree panoramas.

Other improvements here are more for designers than photographers and include big improvements to brushes and support for variable fonts, so this

isn't really a major update on the same scale as the Lightroom CC changes.

WE SAY: Photoshop CC's enhancements for photographers are few, but good.

OVERALL



SO WHAT'S THE PLAN?

Adobe's Photography Plans just became more complicated, and it's important you choose the one that fits your needs

	1TB	20GB	1TB	100GB
PHOTOGRAPHY PLAN	Lightroom CC Plan with 1TB storage	Photography Plan with 20GB storage	Photography Plan with 1TB storage	Lightroom Mobile Plan
Best for	Cloud fans	Traditional desktop users	Cloud and desktop	Mobile users only
Price/month	£9.98/\$9.99	£9.98/\$9.99	£19.97/\$19.99	£4.49/\$TBC
Lightroom CC	✓	✓	✓	✗
Lightroom Classic	✗	✓	✓	✗
Photoshop CC	✗	✓	✓	✗
Lightroom Mobile	✓	✓	✓	✓
Storage	1TB	20GB	1TB	100 GB
Notes	With this plan you get the 'new' Lightroom CC and 1TB storage – but not Photoshop	If you want Photoshop, you need the regular Photography Plan – you also get Lightroom Classic	The same as the Photography Plan, but with 1TB storage. Existing users will be offered a discount for the first year	This plan is for smart devices only – the Lightroom Mobile app is free but the 'premium' version is an in-app purchase



A CAMERA FOR STARTERS

*Is an SLR still the best option for beginners? **Matthew Richards** takes a closer look*

FOR beginners starting out in photography, an SLR has long been the most obvious choice of 'proper' camera. With extensive shooting controls, interchangeable lenses and optional extras, you can start simple and expand your kit as your expertise grows. However, this has become equally true of compact system cameras, which do away with mirrors to enable downsized designs. Some super-skinny models

ditch the viewfinder as well, and photographers moving up from a smartphone might find composing shots on an LCD screen entirely natural.

Any camera for beginners should be modestly priced, intuitive and easy to use, so that you can enjoy getting great results, straight out of the box. However, it should also be able to grow with you, enabling and even encouraging you to learn new skills and techniques, and put them into practice.

THE CONTENDERS

1	Canon EOS 1300D with 18-55mm lens	£360/\$450
2	Canon EOS 200D with 18-55mm lens	£550/\$700
3	Fujifilm X-A10 with 16-50mm lens	£400/\$540
4	Nikon D3400 with 18-55mm lens	£450/\$500
5	Nikon D5600 with 18-55mm lens	£730/\$800
6	Olympus Pen E-PL8 with 14-42mm lens	£550/\$650
7	Panasonic Lumix GX80 with 12-32mm lens	£530/\$700
8	Pentax K-70 with 18-50mm lens	£730/\$700





Canon EOS 1300D

with 18-55mm lens £360/\$450

Dip your toe in the water

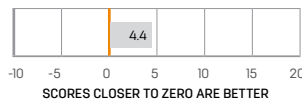
SUPPLIED with the EF-S 18-55mm IS II lens, this is the least expensive kit in the whole group. It's a sensible choice for beginners who want to test the waters of photography before plunging in. Easy to get to grips with, the 1300D has fully automatic and wide-ranging scene modes, available directly on the shooting mode dial.

A feature guide is available, displaying brief textual descriptions on the rear screen. Bridging the gap between basic and advanced shooting modes is Canon's Creative Auto mode, which enables you to adjust attributes like background blur and ambience, without delving into the underlying mechanics.

Performance

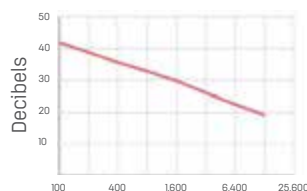
Image quality is very pleasing, but the maximum burst rate of 3fps is sluggish. Autofocus is unavailable when shooting video, and is quite noisy for stills with the kit zoom lens. Beginners who take the time to learn about ISO, white balance, autofocus modes and drive modes are rewarded with an array of buttons on the rear panel for direct access and control.

COLOUR ACCURACY



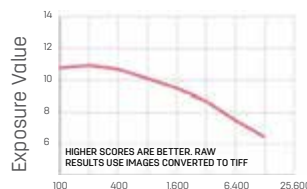
Colour rendition is vivid, but not quite as accurate as from the 200D.

SIGNAL-TO-NOISE RATIO



Good high-ISO lab scores for raw files are backed up by smooth JPEG performance.

DYNAMIC RANGE



It's a bit worse than average, especially at low-to-medium ISO settings.

VERDICT

FEATURES ★★★★★

BUILD & HANDLING ★★★★★

PERFORMANCE ★★★★★

VALUE ★★★★★

OVERALL ★★★★★



Canon EOS 200D

with 18-55mm lens £550/\$700

Simple yet sophisticated

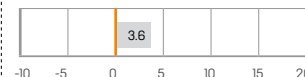
SLIGHTLY smaller and lighter than the Canon 1300D, the newer 200D packs in many more high-tech trappings. There's a Dual Pixel AF image sensor with a greater megapixel count, coupled with an image processor that's three generations newer.

This is Canon's first SLR to feature its new Guided options for the shooting screen and menu display. Beginners are likely to find these offer an intuitive interface for getting the best results in wide-ranging shooting scenarios. As your skills grow, you switch to more conventional screen and menu displays, complete with Canon's excellent Quick menu for altering shooting parameters, as featured on the 1300D. Indeed, it works better on the 200D, thanks to the fitment of a touchscreen, complete with full articulation.

Performance

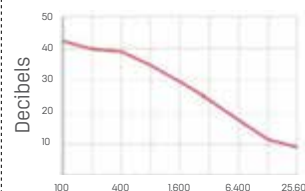
Advanced scene modes and filter effects enable you to get creative with your shooting. Dual Pixel AF works much better for Live View autofocus than in other SLRs on test, and enables smooth and silent transitions in movie capture, using the upgraded kit lens.

COLOUR ACCURACY



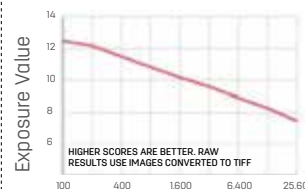
Accurate yet lively, the 200D gives lovely colour balance and sumptuous saturation.

SIGNAL-TO-NOISE RATIO



Good high-ISO performance beats the 1300D, despite the jump in megapixels.

DYNAMIC RANGE



Strong in the low-to-medium area, it beats both Nikon cameras for dynamic range.

VERDICT

FEATURES ★★★★★

BUILD & HANDLING ★★★★★

PERFORMANCE ★★★★★

VALUE ★★★★★

OVERALL ★★★★★



Fujifilm X-A10

with 16-50mm lens £400/\$540

Who needs a viewfinder anyway?

THE X-A10 differs from other compact system cameras in this group: it's based on a larger APS-C format image sensor than the Olympus and Panasonic Micro Four Thirds models.

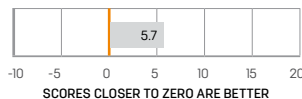
Despite lacking a viewfinder, the body isn't quite as slim as the other CSCs but is still thinner than any of the SLRs. That advantage is lost by the comparatively large size of the kit lens. It's the only camera in the group that doesn't have a hotshoe for attaching an external flashgun.

Like in the Canon 1300D, there's a basic feature guide to help beginners get on terms, with fully automatic, basic scene modes and PASM settings available direct from the shooting mode dial. More advanced, wider-ranging scene modes and filter effects are also available.

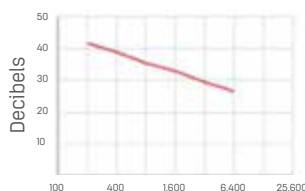
Performance

Image quality is very good overall, and the kit lens's optical stabiliser helps to maintain sharp results. The rear LCD is no match for a viewfinder when you're shooting under a glaring sun, but the fact that it tilts through a full 180 degrees will certainly suit the selfie generation.

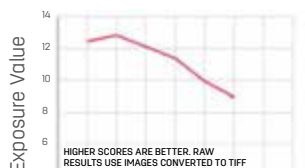
COLOUR ACCURACY



SIGNAL-TO-NOISE RATIO



DYNAMIC RANGE



It's very good as far as it goes, but the raw sensitivity range tops out at ISO 6,400.

VERDICT

FEATURES	★★★★
BUILD & HANDLING	★★★★★
PERFORMANCE	★★★★★
VALUE	★★★★★
OVERALL	★★★★★



Nikon D3400

with 18-55mm lens £450/\$500

All aboard for the tour

NIKON'S successful line of D3xxx SLRs bends over backwards to help beginners. Like its predecessors, the latest D3400 has a dedicated Guide shooting mode, available directly from the mode dial, which also includes full auto, scene modes, special effects settings and PASM.

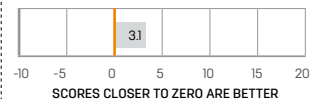
The Guide mode goes a bit further than the Guided interface of the Canon 200D. It contains 'easy' and 'advanced' sections that deliver illustrated, interactive tours of how to get the desired results in a whole variety of different shooting setups. It works a treat, and our only criticism is that the interface would be slicker still if the D3400 had a touchscreen. A tilt or pivot facility for the screen would also have been nice.

The Guide mode goes a bit further than the Guided interface of the Canon 200D. It contains 'easy' and 'advanced' sections that deliver illustrated, interactive tours of how to get the desired results in a whole variety of different shooting setups. It works a treat, and our only criticism is that the interface would be slicker still if the D3400 had a touchscreen. A tilt or pivot facility for the screen would also have been nice.

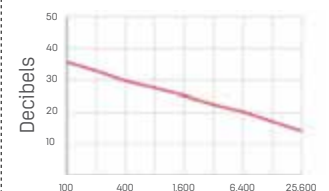
Performance

For continuous shooting, the D3400 beats the Canon 1300D with a faster 5fps burst rate. Its autofocus remains available when shooting movies, and is fairly fast and effective for Live View and movies, at least for an SLR. However, focusing is still audible with the AF-P kit lens, despite it featuring a stepping motor.

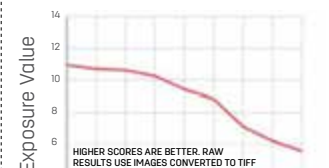
COLOUR ACCURACY



SIGNAL-TO-NOISE RATIO



DYNAMIC RANGE



Good rather than great dynamic range is virtually the same as in the Canon 1300D.

VERDICT

FEATURES	★★★★★
BUILD & HANDLING	★★★★★
PERFORMANCE	★★★★★
VALUE	★★★★★
OVERALL	★★★★★



Nikon D5600
with 18-55mm lens **£730/\$800**
Small build, big aspirations

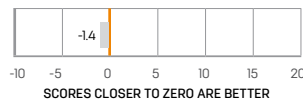
A **LONG** with the Pentax K-70, this is the most expensive camera kit in the group. It comes with the same AF-P 18-55mm VR lens as the D3400, and many of its headline features are the duplicated. Both have a 24.2MP image sensor, an Expeed 4 processor, a pentamirror viewfinder and ISO 100-25,600 sensitivity range.

Less suited to absolute beginners, the D5600 lacks the D3400's interactive Guide shooting mode, but it's still easy to use with full auto, scene and effects modes. The control system, based on an articulated touchscreen, is actually more intuitive. The D5600 is also better able to grow with you as you learn new skills, with a smart bank of custom settings that are absent on the D3400.

Performance

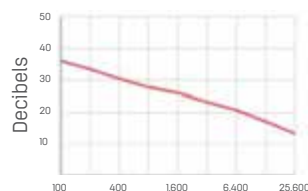
The 39-point system autofocus system is more advanced than in any other SLR on test, covering a generous area of the image frame. For Live View and movies, autofocus isn't as accomplished as in the Canon 200D or any of the compact system cameras. Overall, though, performance is excellent.

COLOUR ACCURACY



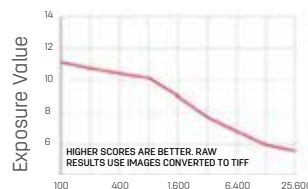
Of the two Nikon cameras on test, this one is the most accurate for colour rendition.

SIGNAL-TO-NOISE RATIO



Smooth yet detailed images at high ISOs are a close match to those of the D3400.

DYNAMIC RANGE



It's very slightly better than from the D3400, but there's not much in it.

VERDICT

FEATURES	★★★★★
BUILD & HANDLING	★★★★★
PERFORMANCE	★★★★★
VALUE	★★★★★
OVERALL	★★★★★



Olympus Pen E-PL8
with 14-42mm lens **£550/\$650**
Enjoy your compact graduation

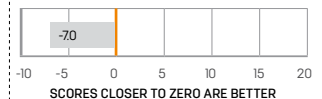
A **NY** budding photographers graduating from a fixed-lens compact camera will feel right at home with the E-PL8. There's no viewfinder and, with its 'pancake zoom' kit lens, it's just about slim enough to squeeze into a pocket. The lens has a motorised zoom and, unlike with the retracting kit lenses of the Nikon and Panasonic cameras, it extends automatically when you switch on the camera.

A simple but effective feature guide is supplemented with a 'live guide' and 'shooting tips', helping you to learn photographic techniques as you shoot. In this respect, the E-PL8 is somewhat similar to the Nikon D3400, although it benefits from a tilting touchscreen. As with the Fujifilm, you can tilt the screen through 180 degrees for taking selfies.

Performance

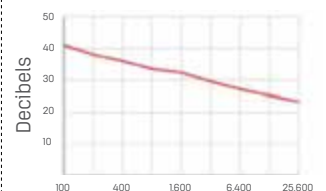
Autofocus is fast and effective in both stills and movie capture. The autofocus and motorised zoom systems are near-silent. Maximum drive rate is a rapid 8.5fps although, as a Micro Four Thirds camera, the image sensor's 16.1-megapixel count is modest.

COLOUR ACCURACY



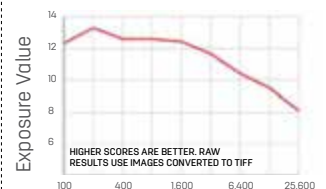
Colour rendition strays to the warm side when using auto white balance.

SIGNAL-TO-NOISE RATIO



Raw scores are good, but high-ISO JPEGs are by far the noisiest of any camera here.

DYNAMIC RANGE



The E-PL8 might be lacking in megapixels, but there's no shortage of dynamic range.

VERDICT

FEATURES	★★★★★
BUILD & HANDLING	★★★★★
PERFORMANCE	★★★★★
VALUE	★★★★★
OVERALL	★★★★★



Panasonic Lumix GX80

with 12-32mm lens £530/\$700

Point and shoot, and more

LIKE other cameras on test, the GX80 features an 'intelligent' auto mode that adjusts camera settings for good results in point-and-shoot photography. There's actually a second 'iA+' auto mode, which adds colour and brightness corrections. As well as these, you get a barrage of scene modes and creative filters at your fingertips, plus a panoramic mode.

All this is made available by a simple mode dial and an intuitive touchscreen interface, albeit with a relatively limited range of tilt. Sensor-shift image stabilisation works with any attached lens, as in the Olympus. However, the GX80 is the only CSC in the group with a built-in electronic viewfinder, making it much easier to compose images under bright sunlight.

Performance

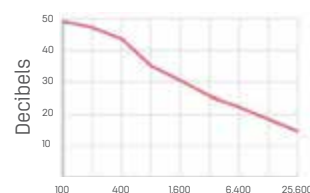
Movie performance is particularly strong; the GX80 is the only camera on test to feature 4K UHD. It's also good at freezing action, with the choice to use a mechanical or electronic shutter, the latter enabling shutter speeds of 1/16,000 sec; but long exposures are limited to two minutes.

COLOUR ACCURACY



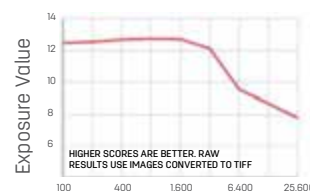
Technically accurate, colours can still look a little muted in standard mode.

SIGNAL-TO-NOISE RATIO



High-ISO images are less noisy than from the Olympus, but with less retention of detail.

DYNAMIC RANGE



The Panasonic and Olympus have virtually the same dynamic range.

VERDICT

FEATURES	★★★★★
BUILD & HANDLING	★★★★★
PERFORMANCE	★★★★★
VALUE	★★★★★
OVERALL	★★★★★



Pentax K-70

with 18-50mm lens £730/\$700

Rugged build and great specs

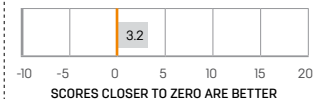
THE K-70 is a robust and highly weather-resistant camera, with a feature set that takes the lead over other SLRs on test, at least in some respects. It's the only one with a pentaprism viewfinder, rather than a pentamirror, and it has a faster 6fps continuous drive rate, plus a faster 1/6000 sec maximum shutter speed. It's also the only SLR on test with sensor-shift image stabilisation.

Like the Nikon D5600, there's not much help on hand for absolute beginners, but there are many scene modes, and the control interface is quite intuitive, based around a fully articulated screen. Unfortunately, it's not a touchscreen. A wealth of custom settings enables you to tailor the camera as your expertise grows.

Performance

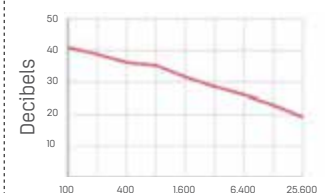
Autofocus is a little sluggish and quite noisy when using the kit lens. It also has a tendency to hunt back and forth in Live View mode, and continuous autofocus is best avoided when shooting movies. In all other respects, the K-70 is a strong performer that delivers impressive image quality.

COLOUR ACCURACY



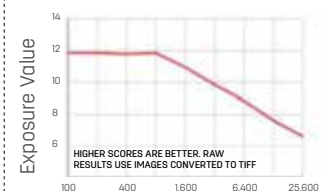
The lab score is pretty respectable, but red hues can look a little on the dark side.

SIGNAL-TO-NOISE RATIO



Even at high ISO settings, images are quite noise-free but retain very good fine detail.

DYNAMIC RANGE



With impressive dynamic range, the Pentax goes toe to toe with the Canon 200D.

VERDICT

FEATURES	★★★★★
BUILD & HANDLING	★★★★★
PERFORMANCE	★★★★★
VALUE	★★★★★
OVERALL	★★★★★

THE VERDICT

Canon keeps things simple

The Canon EOS 200D is brilliant for beginners



THE good news for beginners is that there's a strong choice of accessible cameras for them to choose between. With two different styles of shooting interfaces and menu systems on offer, the Canon 200D makes life simple for beginners, yet remains well-suited to photographers who have grown in expertise. Handling is a joy, performance is excellent and, as one of the smallest and lightest SLRs on the planet, it's easy to take anywhere. All in all, it's our favourite beginners' camera, and is streets ahead of its 1300D stablemate.

The Nikon D3400 is a particularly beginner-friendly camera, with its Guide shooting mode but, we prefer the D5600 for its more intuitive touchscreen interface, its better performance and the addition of custom settings. It's a much more powerful camera, yet it still makes it reasonably easy to master the basics. The Pentax K-70 is even more advanced in some respects, but its autofocus system and kit lens are rather more basic than those of the D5600, and the image quality isn't quite as good.

The Panasonic GX80 is our favourite compact system camera of the three on

test. Its electronic viewfinder makes it feel more like a 'proper' camera, it has a smart range of features, and it blends automatic and scene modes well with creative effects.

We're not so taken with the Olympus E-PL8, and much prefer the OM-D E-M10 II + 14-42mm kit (£570/\$500), which won our group test of travel cameras in *Digital Camera* 194. The size of the Fujifilm X-A10's kit lens feels a bit of a mismatch for the body and we're not great fans of its handling, but its image quality and overall performance are very satisfying.

HOW THE CAMERAS COMPARE

								
	Canon EOS 1300D + 18-55mm	Canon EOS 200D + 18-55mm	Fujifilm X-A10 + 16-50mm	Nikon D3400 + 18-55mm	Nikon D5600 + 18-55mm	Olympus Pen E-PL8 + 14-42mm	Panasonic Lumix GX80 + 12-32mm	Pentax K-70 + 18-50mm
Website	www.canon.co.uk		www.fujifilm.co.uk	www.nikon.co.uk		www.olympus.co.uk	www.panasonic.co.uk	www.pentax.co.uk
Street price (with lens)	£360/\$450	£550/\$700	£400/\$540	£450/\$500	£730/\$800	£550/\$650	£530/\$700	£730/\$700
Camera type	SLR	SLR	CSC	SLR	SLR	CSC	CSC	SLR
Image sensor	18.0MP CMOS APS-C	24.2MP CMOS APS-C	16.3MP CMOS APS-C	24.2MP CMOS APS-C	24.2MP CMOS APS-C	16.1MP Live MOS, MFT	16.0MP Live MOS, MFT	24.2MP CMOS APS-C
Crop factor, eff. focal length	1.6x, 28.8-88mm	1.6x, 28.8-88mm	1.5x, 24-75mm	1.5x, 27-82.5mm	1.5x, 27-82.5mm	2.0x, 28-84mm	2.0x, 24-64mm	1.5x, 27-75mm
Image processor	Digic 4+	Digic 7	EXR II	Expeed 4	Expeed 4	TruePic VII	Venus Engine	Prime MII
Lens mount	Canon EF-S	Canon EF-S	Fujifilm X	Nikon F (DX)	Nikon F (DX)	Micro Four Thirds	Micro Four Thirds	Pentax KAF2
Viewfinder	Pentamirror	Pentamirror	None	Pentamirror	Pentamirror	None	Electronic 2.76M	Pentaprism
ISO range (expanded)	ISO 100-6,400 (12,800)	ISO 100-25,600 (51,200)	ISO 200-6,400 (100-25,600)	ISO 100-25,600	ISO 100-25,600	ISO 200-25,600	ISO 200-25,600 (100)	ISO 100-102,400
Autofocus	9-point, phase AF	9-point, phase AF	49-point, contrast AF	11-point, phase AF	39-point, phase AF	81-point, contrast AF	49-point, contrast AF	11-point, phase AF
Shutter speeds	1/4,000-30 sec, Bulb	1/4,000-30 sec, Bulb	1/32,000-30 sec, Bulb (60 min)	1/4,000-30 sec, Bulb	1/4,000-30 sec, Bulb	1/4,000-60 sec, Bulb (30 min)	1/16,000-60 sec, Bulb (2 min)	1/6,000-30 sec, Bulb
Stabilisation	Via lens	Via lens	Via lens	Via lens	Via lens	Sensor-shift	Sensor-shift	Sensor-shift
Flash	Pop-up + hotshoe	Pop-up + hotshoe	Pop-up	Pop-up + hotshoe	Pop-up + hotshoe	Clip-on	Pop-up + hotshoe	Pop-up + hotshoe
Max burst rate	3fps	5fps	6fps	5fps	5fps	8.5fps	8fps	6fps
Video – max resolution	1080p	1080p	1080p	1080p	1080p	1080p	4K UHD	1080p
LCD screen	3.0-inch, 920k	3.0-inch, 1,040k, touch, pivot	3.0-inch, 1,040k, tilt	3.0-inch, 921k	3.2-inch, 1,037k, pivot, touch	3.0-inch, 1,037k, tilt, touch	3.0-inch, 1,040k, tilt, touch	3.0-inch, 921k, pivot
Memory	SD/SDHC/SDXC	SD/SDHC/SDXC UHS-I	SD/SDHC/SDXC UHS-I	SD/SDHC/SDXC UHS-I	SD/SDHC/SDXC UHS-I	SD/SDHC/SDXC UHS-II	SD/SDHC/SDXC UHS-III	SD/SDHC/SDXC UHS-I
Built-in wireless	Wi-Fi, NFC	Wi-Fi, NFC, Bluetooth	Wi-Fi	Bluetooth	Wi-Fi, NFC, Bluetooth	Wi-Fi	Wi-Fi	Wi-Fi
Body (W x H x D, weight)	129 x 101 x 78mm, 485g	122 x 93 x 70mm, 453g	117 x 67 x 40mm, 331g	124 x 98 x 76mm, 445g	124 x 97 x 70mm, 465g	117 x 68 x 38mm, 374g	122 x 71 x 44mm, 426g	93 x 126 x 74mm, 688g
Battery life (Cipa)	500 shots	650 shots	410 shots	1,200 shots	970 shots	350 shots	290 shots	480 shots
FEATURES	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
BUILD & HANDLING	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
PERFORMANCE	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
VALUE	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
OVERALL	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★



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1 AT 37 x 28 x 14cm, the Hadley One is a slightly larger version of Billingham's best-selling Hadley Pro. Its standout feature is a 13in laptop slot behind the main compartment.

It's a practically sized bag without being unwieldy, although you only get a half-width padded insert included. This will swallow a 24-70mm f/2.8 lens, plus an ungripped full-frame body with attached 50mm lens. The remaining space in the main compartment is great for personal effects, or you can add an optional second camera insert. Out front are two large pockets, perfect for keeping lenses reachable during a shoot.

But the real reasons you buy a Hadley One are its supreme quality, and a timeless style that'll suit any occasion. The smell of the leather straps and reinforcing trim is worth the money alone, while the rugged canvas outer material and slightly domed flap shrug off abuse and a heavy rain shower.

PROS Stunning material and build quality; classy design; spacious

CONS Flap fasteners can be fiddly; only a half-width camera insert is included

VERDICT

★★★★★

2 PART of Gitzo's brand-new Century bag collection, it's only fitting that this messenger variant sports an expandable pouch designed to house a Gitzo Traveler

tripod. There are other neat features like locking side pocket zippers, and a class-leading Fidlock fastener that latches and releases the main flap effortlessly and silently.

The flap has an easy access slot on top, under which is a compact but fairly practical main compartment that'll just about stash a 5D IV or a D850 with a small attached lens, plus a couple more optics alongside. Behind this is a sexy suede-lined 13in laptop pouch, although the two end pockets won't fit much other than the included rain cover.

As you'd expect from Gitzo, build and material quality are very good, with leather trim and premium hardware. The carbon-effect accents won't be to everyone's taste, but you won't feel short-changed.

PROS Portable yet practical; packed with features; well-made

CONS Arguably less stylish and desirable than some high-end rivals

VERDICT

★★★★★

3 MANFROTTO wowed us when it unveiled the stylish yet keenly priced Windsor collection – and this, the largest messenger bag in the range, isn't just a good looker.

Its 42 x 33 x 15cm outer dimensions give plenty of interior space for a full-frame body and extra lenses, including a 70-200mm telephoto.

The bag is set up for half camera gear and half daily essentials, though the versatile, extra-thick interior padding can be configured to span the entire main compartment. A 15in laptop slot and sizable front pouch add extra storage, and there's a useful fast-access slot in the top of the flap. This is secured by a pair of magnetic catches that release effortlessly; but with no secondary cover within, the bag is far from secure.

Other niggles include a tacky and inflexible shoulder strap pad. Although you get nice leather accents with fabrics that are more than acceptable, the bag lacks a true premium feel.

PROS Attractive style at an accessible price; very roomy; easily accessible

CONS Needs a secondary inner cover for security; uncomfortable strap

VERDICT

★★★★★

FIVE THINGS TO LOOK FOR...

1 SIZE MATTERS

Too big and it could be a pain in the neck, but too small and you won't have room.

2 ACCESSIBILITY

Missing a shot just won't do. Make sure your bag of choice can be opened fast.

3 ELEMENTAL

Most bags offer weather protection, but some are sealed better than others.

4 COMFORT COUNTS

Strap quality is vital if you don't want your camera to be a burden.

5 BLEND IN

Pack your valuable kit in a bag styled to keep you under a thief's radar.



www.nest-style.com

Nest Athena A40

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Peak Design Everyday Messenger 15

£230/\$250



www.thinktankphoto.com

Think Tank Signature 13

£269/\$279

4

THE Athena A40 is a cheap but surprisingly cheerful bag.

The utilitarian design won't win any style awards, but inside you'll easily fit a full-frame DSLR, with the 28cm interior height well suited to swallowing longer lenses, even if shorter optics can be dwarfed.

Padding is generous regardless of the price, and the exterior nylon fabric feels tough and long-lasting. You even get big rubber feet on the base for added scuff protection – only the Gitzo bag also boasts these. There are no fancy flap fasteners – rather a basic squeeze buckle – but the flap can also be zippered shut for extra weather protection and security. A 13in laptop slot and generous rear document pouch add value.

Niggles? The strap feels cheap, its pad won't stay on your shoulder for long, and there's no top slot for fast access. But you'll have a tough job doing better for the money, especially considering that Nest regularly offers sizable discounts.

PROS Weather-resistant materials; spacious interior; incredible price

CONS Not ideal for carrying shorter lenses; no top slot for faster access

VERDICT

★★★★★

5

THE Everyday Messenger is bristling with clever touches.

A spring-loaded flap catch with four fastening points is both secure yet easy to use, letting the bag expand or contract to suit varying loads. The flap also has a zippered top passthrough for even easier access, and behind this is another zip revealing a 15in laptop slot and a separate tablet compartment. You can even attach a tripod on top.

Inside the main section are innovative dividers that snap around and over individual items, although you'll need to spend some time arranging an optimal layout, as they're not as squashy and forgiving as conventional foam pads.

Everything's supported from a wide and supple strap, anchored at either end by precision hinges that allow for free movement without jangling. We also like the stabilising waist strap that prevents the bag bouncing as you stride, while the grey, charcoal and tan versions all look the part and are beautifully made.

PROS Stylish, quality build with innovative and useful features

CONS The relatively stiff interior dividers take some getting used to

VERDICT

★★★★★

6

WHERE Think Tank's popular Retrospective range offers casual style, the Signature 13 is a more formal affair.

Its boxy 37 x 27 x 16cm exterior retains its shape well and offers a high level of gear protection, with extra security from an internal zippered secondary cover.

Although the bag is compact, arrange the quality dividers to split the main compartment into three sections and you've got an optimal layout for a DSLR with attached 24-70mm, and two reasonably sized optics on either side. A 13in laptop will slot in behind, while a large expanding front pocket is ideal for a flashgun and filters.

The manufacturing quality is top-notch. The wool-like fabric feels soft yet hard-wearing, and there's a leather base and accents that'll worry Billingham. A long, leather-backed neoprene shoulder pad is also especially comfortable. Our only minor niggles concerns the flap latches, which can be a little fiddly.

PROS Oozes quality and style; well-sized for an essential DSLR kit

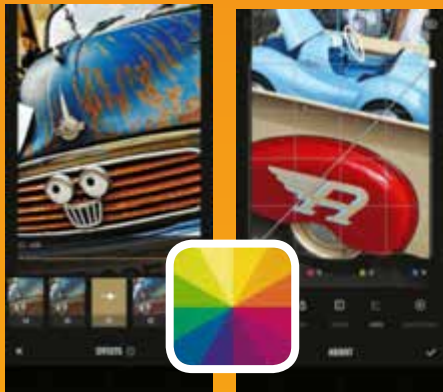
CONS No easy access top slot; the flap catch isn't as convenient as Gitzo's

VERDICT

★★★★★

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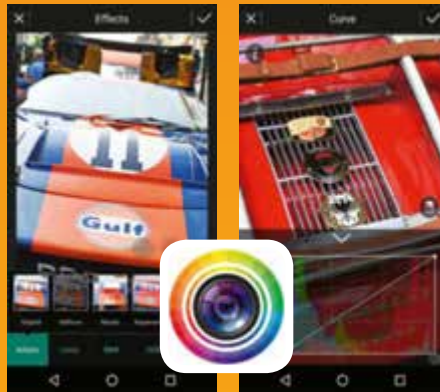
Fotor

IOS & ANDROID / FREE

Fotor includes camera and social elements, but its editing section is packed with attractive filters and adjustment options, plus tweaks like shallow depth of field. It's just a pity you don't get many selective editing tools.

OVERALL

★★★★★



www.cyberlink.com

PhotoDirector

IOS & ANDROID / FREE

PhotoDirector's Edit mode contains a good range of filters and sliders. There are also nifty extras like object removal, plus very effective selective colour replacement, but the app's more suited to casual snappers.

OVERALL

★★★★★



www.adobe.com

Photoshop Express

IOS & ANDROID / FREE

This is just one of several separate mobile Photoshop apps, although the Express ethos limits its power. Adjustable filters and preset effects are in abundance, but so too are a plethora of unnecessary borders and frames.

OVERALL

★★★★★



www.picsart.com

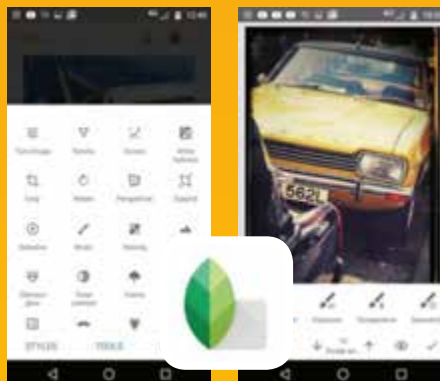
PicsArt Photo Studio

IOS & ANDROID / FREE

Here's an app that manages to combine fun features with more serious editing tools. You can clone, adjust perspective, or tweak curves, but PicsArt lives up to its name with a host of stunning Magic Effect art filters.

OVERALL

★★★★★



www.google.com

Snapseed

IOS & ANDROID / FREE

Google's mobile image editor is less about filters and instead favours useful and powerful tools that include excellent selective editing features. Snapseed comes closest to having Photoshop on your phone.

OVERALL

★★★★★



www.vSCO.com

VSCO

IOS & ANDROID / FREE

VSCO is a community for sharing shots or following other users. Its editing section is slick and effortless with plenty of adjustment options, but filters – though attractive – are few, and extra tools will cost you.

OVERALL

★★★★★

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BY JAMES PATERSON

CREATIVE SPOTLIGHT

136 Discover top Photoshop tricks to enhance the atmosphere of your shots in various ways



61 MINS
OF VIDEO
WITH THIS
ISSUE

DIGITAL DARKROOM

Transform your photos with our easy, effective guides



124

Photoshop Masterclass

Fake a streaked long-exposure sky with Jon Adams' clever Photoshop trick to inject a bit of intrigue into your building photos – no ND filters required



130

Lightroom Skills

Create panoramas packed with detail by using Lightroom's Merge To Pano tool. Sean McCormack shows you how to stitch frames together and edit your panorama in one fell swoop



132

Artist Insight

Master the invaluable art of non-destructive photo editing, with James Abbott's guide to experimenting with effects, filters, colour adjustments and more without the risk of spoiling a shot



**JON
ADAMS**

Photographer
and writer

Jon is a photographer and writer, and also provides individual and small group tuition in digital SLR and Photoshop skills. jon@jonadamsmedia.co.uk

ADD DRAMA TO ARCHITECTURAL SHOTS



Photoshop

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CAPTURE the movement of the clouds streaking across the sky, and you'll immediately have an intriguing shot that compresses time.

Place an atmospheric building in the foreground and you'll have something even more rewarding; but getting the right exposure balance in-camera is a challenge that will involve a tripod, high-density filters, and a good degree of trial and error.

With long exposure times typically measured in minutes rather than seconds, it's a great project to aspire to. But if you

already have some suitable building shots on your hard drive and want to emulate the look of streaking clouds without investing in special filters, the effect is simple once you know how it's done.

The key to success lies in separating the subject from the sky in a highly accurate way, then using a new sky with a special filter effect to create the scudding clouds. To make the journey as complete as possible, we're going to start from the top with an original raw file, and run through the entire process. This will give you the

chance to follow it through with your own pictures, and produce some bespoke images with a long-exposure feel.

Although the streaking clouds are the elements that catch the eye in these kinds of pictures, the true focal point is still the subject in the foreground, so taking the time to get the right levels of contrast and detail in this area is worthwhile. This is always easier to achieve when you have the extra image data that resides in a raw file, so we'll start off adjusting that before moving on to the Photoshop antics.

1

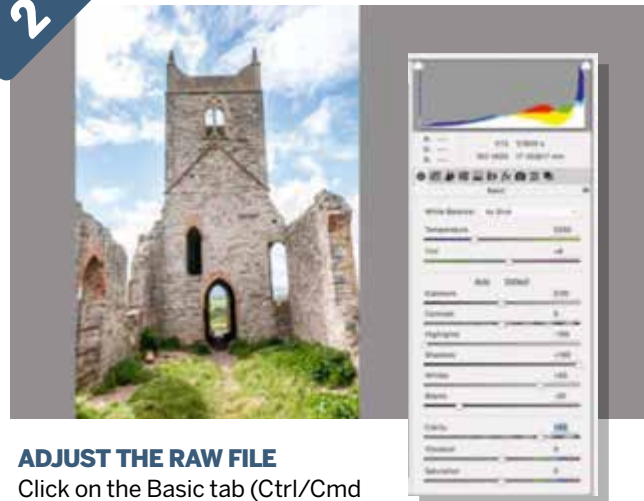


CORRECT OPTICAL DEFECTS

Open an architectural shot, or use the provided Ruins start file. The first task is to convert the raw file, so right-click on the file and select Open With > Adobe Photoshop CC. The picture will load into Adobe Camera Raw; to get it the right way up, press L to rotate it left.

Now click on the Lens Corrections tab (or press Ctrl/Cmd+Alt+6) and under the Profile sub tab, tick Remove Chromatic Aberration and Enable Profile Corrections. Provided the lens you used to take the shot is in the database, this will automatically fix any optical defects like distortion, vignetting and fringing. If your lens doesn't appear automatically, select it from the Make and Model boxes to apply the relevant adjustments.

2

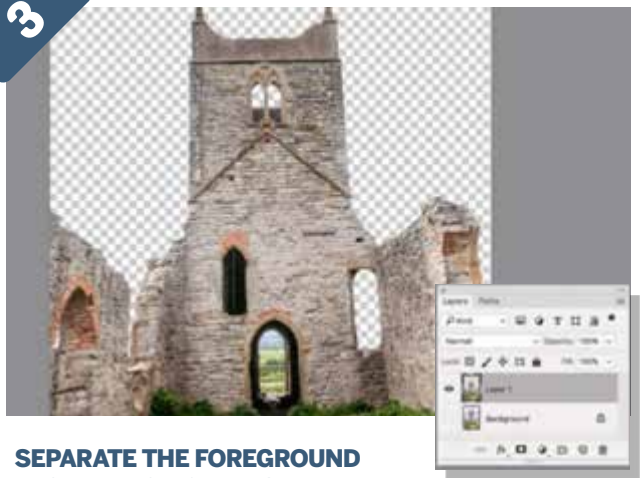


ADJUST THE RAW FILE

Click on the Basic tab (Ctrl/Cmd +Alt+1) and adjust the sliders to get a good-looking image. On our example, compress the brighter tones by taking Highlights to -100 and expand the darker areas by moving Shadows to +100.

These adjustments restore lots of detail, but can make a picture look washed out. To fix this, you can boost the overall contrast by reducing Blacks to -55 and increasing Whites to +50. To add definition to the midtones, push Clarity to +50. With your own raw files, you may also need to adjust Exposure and Temperature, but on this shot, the default settings are fine. Now click Open Image to load the shot into the regular Photoshop interface.

3



SEPARATE THE FOREGROUND FROM THE ORIGINAL SKY

You need to separate the building from the sky, so a selection is needed. On this shot the sky is easier to select than the foreground, so pick up the Quick Selection tool, and check that Auto Enhance is ticked. Drag over the sky until the entire sky is selected. Now drag inside the windows and use a small brush size to select the thinner strips of sky. To get the foreground selected instead of the sky, press Ctrl/Cmd+Shift+I. To avoid leaving a halo around the edge, go to Select > Modify > Contract, and enter 1 px. Now press Ctrl/Cmd+J to punch the building into a new layer. Switch off the layer beneath, and you'll see it floating on a transparent background.

EXPERT TIP

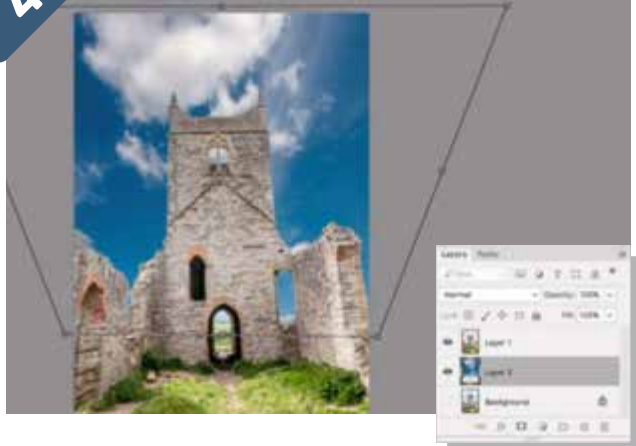


Straighten up your buildings

If you use a wide-angle lens and tilt up to capture the full height of a building, it'll appear to be falling backwards, because the exaggerated perspective will make the vertical lines appear to converge. To correct this, make a selection of your picture (Ctrl/Cmd+A) and press Ctrl/Cmd+T to enter Free Transform. Zoom out to create some room around the canvas (Ctrl/Cmd+minus), and while holding Ctrl/Cmd, drag out the top corner handles to straighten up the verticals. This will 'squash' the building a little, so to correct this, pull up the top-middle handle to increase the height and restore natural-looking proportions. Once you're happy, press Return to apply.

DIGITAL DARKROOM

4

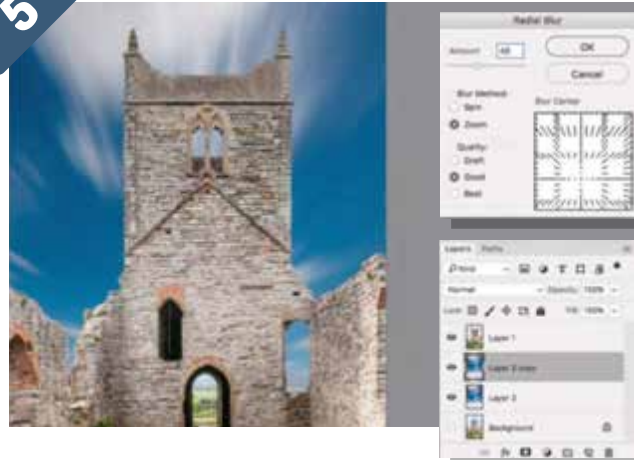


ADD A NEW SKY

Choose a good, contrasty sky from your files, or open *RuinSky.jpg* from the provided start files. Once it's on-screen in Photoshop, press **Ctrl/Cmd+A** to select it, followed by **Ctrl/Cmd+C** to copy it. Close the sky document with **Ctrl/Cmd+W**, then paste it into the new image with **Ctrl/Cmd+V**.

In the Layers panel, drag the sky layer so that it's underneath the building with the transparent background, then press **Ctrl/Cmd+T** to enter Free Transform. Drag out the corner handles to stretch the sky and place it so it sits well in the composition. When you're happy, press **Return** to confirm the changes.

5



BLUR THE SKY

To get the long-exposure effect, make sure the sky layer is active and press **Ctrl/Cmd+J** to copy it. This gives you a backup in case anything goes wrong. With the copy layer active, go to **Filter > Blur > Radial Blur**. In the dialogue box, select the **Zoom** option and try a setting of 40%. Use the **Good** setting to cut down on the processing time, and click on the preview window to set the blur centre roughly in the middle, at the height of your horizon.

Click **OK**, and the streaking effect will emanate from the centre, giving the clouds a sense of movement. If you require a more dramatic effect, you can run the filter again by clicking on **Radial Blur** at the top of the **Filter** menu.

6



REFINE THE EDGE OF THE BUILDING

With your long-exposure sky in place, it's time to clean up the edge of the building to finesse the cutout so it blends in well. To do this, zoom in tight and scan around the edge, removing any remaining sky areas with a small Eraser.

Once you've done this, you need to achieve a realistic-looking blend between the edge details and the new sky. A great way to do this is with the **Blur** tool. Select it and set the brush size to between 6 and 10px, and **Strength** to 40. Make sure that **Use All Layers** is *not* ticked: you only want to affect the building's layer. Click on this layer to make it active and brush along the edge to soften the detail and blend the edge into the sky. It takes a little time to go all the way round the perimeter, but it gives an excellent result.

7



WORK UP CONTRAST IN THE FOREGROUND WITH THE DODGE TOOL

Now your foreground and sky are working well together, it's time to accentuate the contrast to make the most of the building's texture. With the building layer active, make a copy of it by pressing **Ctrl/Cmd+J**. Now select the **Dodge** tool, and in the **Tool Options** bar at the top of the screen, set **Range** to **Highlights** and **Exposure** to a low value of 5%.

With a soft-edged brush, paint over the foreground to accentuate the highlights in the stonework. Because the change will be subtle, check your progress by switching off the layer's eye icon and comparing the results with the undodged layer beneath.

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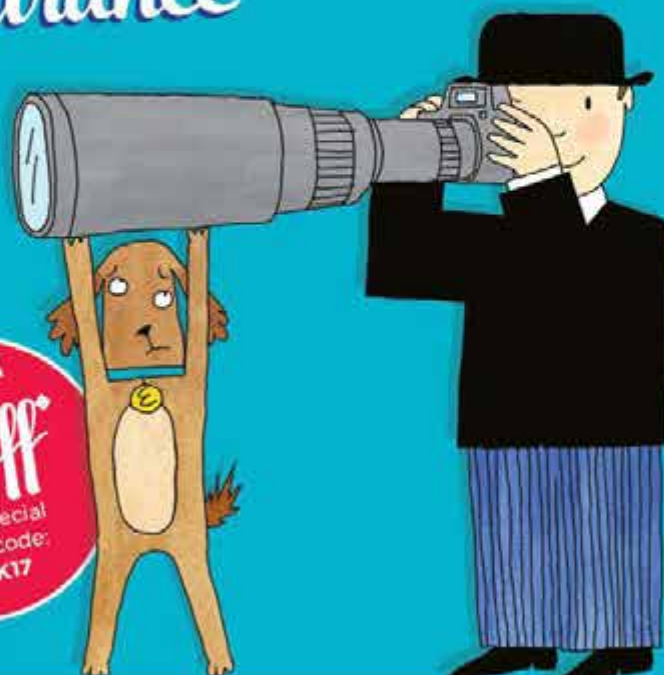
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8



COMPLETE CONTRAST CHANGES WITH THE BURN TOOL

With your dodging complete, select the Burn tool (it's grouped with the Dodge tool); set Range to Shadows, but leave Exposure at 5%. So you can keep track of your burning, make a copy of your dodged layer with Ctrl/Cmd+J. Play the Burn tool over the foreground, and you'll see the darker areas get darker still. Just as you did with the Dodge tool, check your progress by periodically switching off the layer to compare it with the one beneath. Both dodging and burning are subtle techniques, and you often don't realise that you've overdone it: with this method, you can monitor the difference you are making.

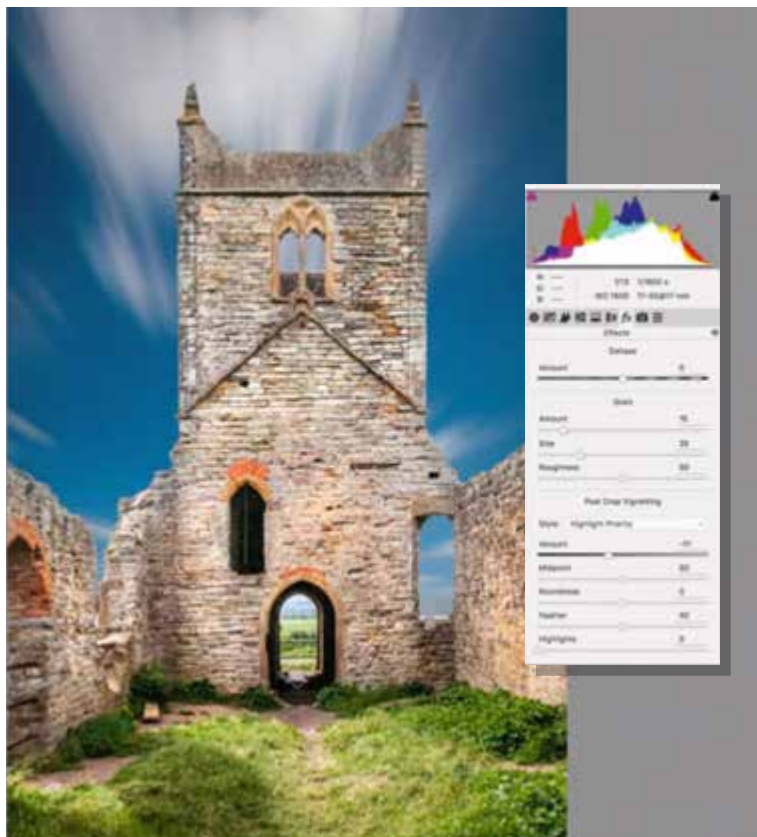
9

MERGE, VIGNETTE AND ADD GRAIN

With the new sky in place and the foreground contrast boosted, the image is now complete. But when you've added a new sky, there's often a chance of a 'grain' mismatch. It's not uncommon to see a grainy foreground sitting in front of a smooth, noise-free sky, and this will always look at odds. To disguise the join and get your two components in harmony, it's wise to add a little noise to get them looking like they're part of the same whole and were captured at the same time.

Another great finishing touch is a subtle darkening at the edge of the picture. This hems it in and focuses attention towards the centre. The good news is, you can add both these effects quickly and easily by using the Camera Raw interface as a filter.

To do this, make sure your top layer is active, then press Ctrl/Cmd+Alt+Shift+E to merge everything into a new layer. Go to Filter > Camera Raw; when it opens, click on the FX tab. Increase the Grain slider to 15, then scroll down to Post Crop Vignetting and move the slider a little to the left. A setting of -17 worked well for this image, but your mileage may vary. Click OK, then save your image in a format of your choice via File > Save As.



EXPERT
TIP

Using the Sponge tool

The Dodge and Burn tools create an increase in saturation in the areas they're used on. This can give an attractive finish with some subjects, but with others it can look unnatural and distracting. To reduce the intensity of colour after using the tools, select the Sponge tool (it's grouped with the Dodge and Burn tools) and set it to Desaturate, with an Exposure of 30%. Play the brush over the saturated areas to tone down the intensity until the natural colour is restored.

You can also use the Sponge tool to add colour by setting it to Saturate. This is useful if you desaturate too much, or if you want to bring the rest of the picture in line with the oversaturation from the Dodge and Burn tools.

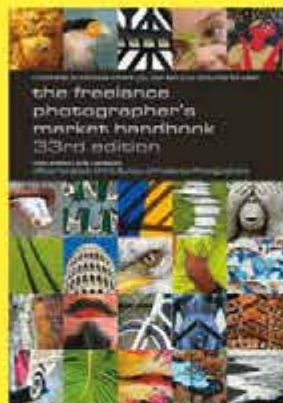
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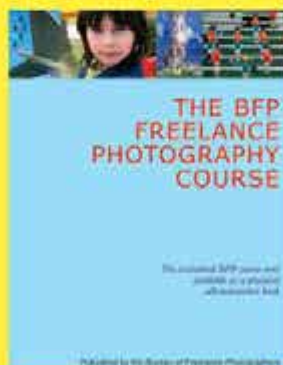


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DIGITAL DARKROOM



SEAN McCORMACK

Photographer and writer

Sean McCormack is a photographer and writer based in Galway in the west of Ireland. He's the author of *The Indispensable Guide to Lightroom CC*.
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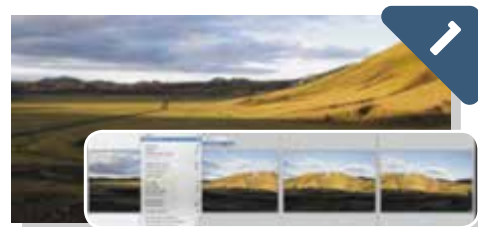
Your initial photos show that either you can't capture the scene in one photo – or if you can, it's kinda small, and there's a lot of that boring sky. You could crop the sky out after, but then you'll lose the quality you need for a decent print. You know it's time for a panorama – so you shoot a sequence of overlapping shots to edit later.

Traditionally, you'd now be at the point where you have to edit each file, then render the raw to bring into Photoshop, or another app to merge the files together. Because the file is rendered, you'd have less leeway in editing after, which isn't optimal.

Fortunately Lightroom can come to the rescue here with its Merge To Pano tool. It creates a stitched file that retains all the edit-ability of a raw file, because it is actually a raw file – a DNG file to be precise, Adobe's Digital Negative format.

START THE PROCESS

Collect the images you want in the panorama together and select them in the Grid. Select the menu command Photo > Photo Merge > Panorama. This has the shortcut Ctrl+M – unusually, it's the same shortcut in both macOS and Windows.



PANORAMA OPTIONS

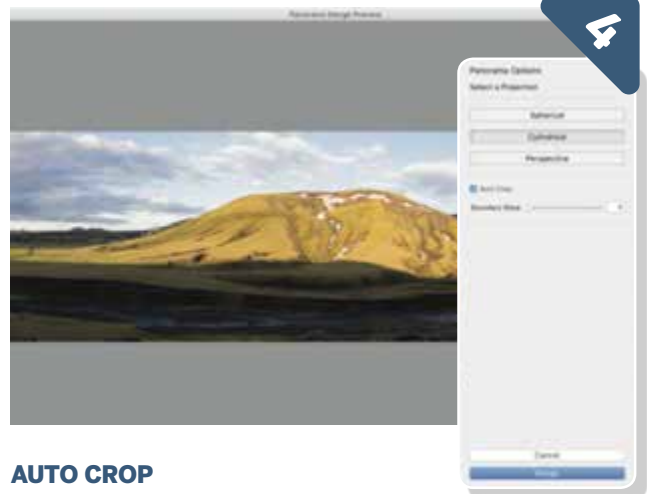
The Panorama dialog will open and you'll have a short wait while a preview of the panorama is created. You can see the available options at this point, including three projection options. Spherical maps the panorama to a sphere; Cylindrical maps it to a cylinder, with the reference image in the centre. Finally, Perspective creates a bowtie effect with the centre image normal, and the others stretched to fix the perspective.





PICK YOUR FAVOURITE

Spherical is the most common projection and is the default option. It generally works well, but often it's a good idea to preview the other options as well. For this image, Cylindrical gives you a larger image mapping and seems to retain the height of the view. Perspective doesn't want to work at all.



AUTO CROP

After selecting the most appropriate mapping option and viewing the preview of your combined image, choose Auto Crop. This will find the optimal point to crop to a rectangle and remove the empty pixels that show as white in the preview.



BOUNDARY WARP

There is another option you could try instead of Auto Crop. Boundary Warp will stretch the pixels out to fill the available frame at 100. It may stretch pixels too much, so you may prefer to use it below 100 and then use Auto Crop to remove the empty areas.



FINISHING TOUCHES

Click Merge to create the panorama. Because the panorama is a DNG file, you can apply a camera profile, like a Vivid or Landscape mode. You have full control over White Balance, so you can easily warm the photo for a sunset look, and do further edits to the file in Lightroom.

Shooting the panorama

Great panoramas start with the photography

There are a few tips to getting good shots for the panorama. The best way is to use a panoramic head for a tripod. These are a bit expensive and obviously add weight if you're travelling. If you're not using a head, try to pivot the camera around the entrance pupil of the lens to avoid getting parallax errors (like seeing a foreground rock merged badly). Roughly

speaking, keeping the middle of the lens still will help a lot compared to swinging it around to get the shots.

You should overlap shots by at least 30%, if not more, to give Lightroom a better chance at stitching them. For increased resolution, use a shorter lens like a 35mm and rotate the camera sideways, then shoot more overlapping shots.





JAMES ABBOTT

Photographer
and journalist

James is a professional photographer. He's an advanced Photoshop user and has created hundreds of tutorials to help other photographers improve their skills.
jamesaphoto.co.uk

BACK IN TIME WITH NON-DESTRUCTIVE EDITING TOOLS



Keep all your options open as edit your shots, with the ability to change, delete and add to effects without ever reducing image quality

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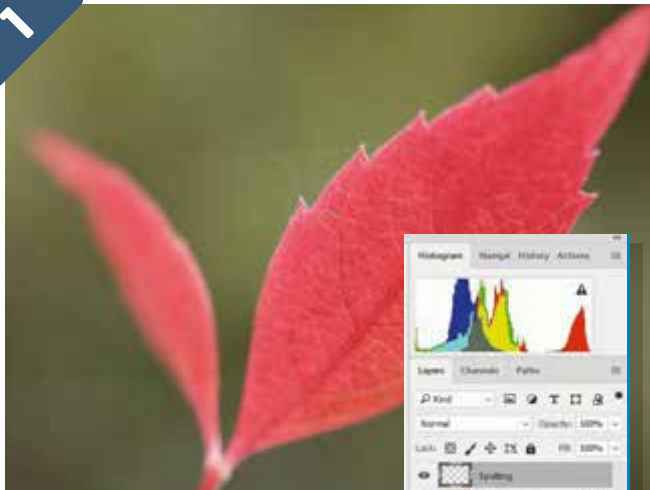


NON-DESTRUCTIVE editing is often the best way to edit your images. This workflow option basically involves using Adjustment Layers to add effects to images, while additional layers can be used for cloning and other tasks – the underlying pixels remain untouched.

So what's the point of non-destructive editing? The thing about this approach is that it's not so much about saving the original image file if your workflow takes care to maintain a backed-up original; it's all about having the ability to make changes to adjustments at any time during or after the editing process.

Just imagine putting in a few hours of retouching to find that you could have applied contrast to the image more effectively, or that you decide that black-and-white wasn't the best idea after all. When you work on the Background layer, you can't always go back, but with non-destructive editing, you always can.

1



CREATE A CLONING LAYER

Open your image. To get started, create an empty new layer by clicking on the New Layer icon at the bottom of the Layers panel – it's the sheet of paper with the bottom-left corner turned up. When the layer appears in the stack, double-click it and rename it something like 'Spotting' or 'Cloning' so you can see what the layer is for at a glance.

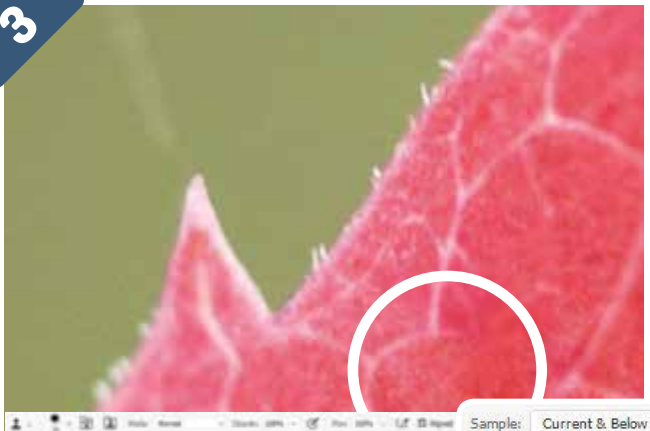
2



CLONE OUT LEAF DAMAGE

Zoom into the image, then press J to select the Healing Brush Tool. Make sure that Sample: is set to Current & Below. Set Edge Hardness to 50% and make the brush half the size of the hole in the leaf. Hold down ALT to sample from an area close to the hole and click over it to heal. If you make a mistake, press Cmd/Ctrl+Z to undo it.

3



USE PRECISION CLONING

Hold down the space bar to activate the Hand Tool and scroll over to the left so you can see the spider web attached to the leaf. Next, press S on the keyboard to activate the Clone Stamp Tool, and make sure that Sample: is set to Current & Below. Set Edge Hardness and Size, then sample and clone the web close to the leaf before switching to the Healing Brush Tool to finish off.

4



ADD CONTRAST AND DESATURATE

Click the Create New Fill Or Adjustment Layer icon in the Layers panel. Select Black & White from the list of options, and when the dialog box opens drag the Reds slider left to 25 to darken the leaf. Change this layer's Blend mode to Soft Light.

Do more with Smart Filters

If you're working non-destructively, using Smart Filters is the best option

Photoshop filters are often an essential way of achieving specific effects – but one of the problems with using filters in the past is that once they were applied,

you couldn't reopen the filter's dialog box and make changes. Convert For Smart Filters is an option you can apply to a layer where you've merged all

visible layers using the shortcut Cmd/Ctrl+Shift+Alt+E. When you apply filters to it, you can access them again via the Layers panel.



EXPERT TIP

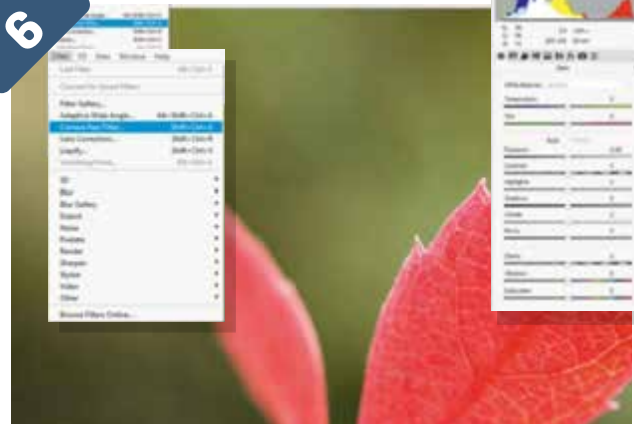
5



MERGE ALL VISIBLE LAYERS

The Black & White 1 layer at the top of the stack should still be active and highlighted. Press Cmd/Ctrl+Shift+Alt+E to merge all visible layers into a new layer at the top of the stack. Next go to Filter > Convert For Smart Filters, and after a few moments the layer will be converted, ready for you to apply filters to it.

6



OPEN THE CAMERA RAW FILTER

Go to Filter > Camera Raw Filter and a dialog box will open, giving you access to all the Camera Raw controls as a filter. Set Clarity to 15, then click on the HSL/Grayscale tab, shown as three rectangles. All the adjustments you make can be changed later on.



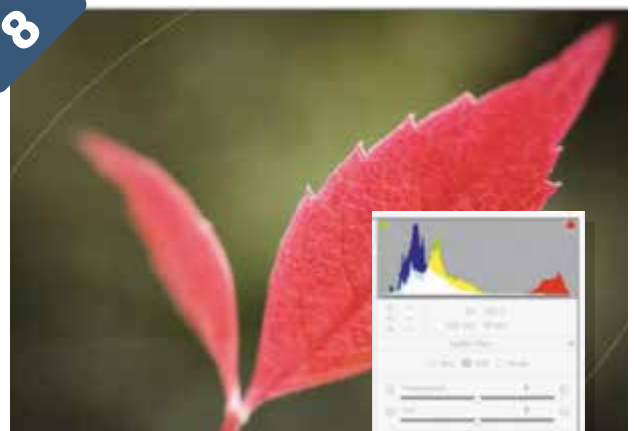
7



BOOST COLOUR

In HSL, make sure the Saturation tab is selected, and increase the saturation of Reds to +5. Alongside the darkening you applied with the Black & White Adjustment Layer, this will maintain the original colour of the leaf, but leave the background slightly desaturated. Next, click back on the Basic tab and then on the Radial Filter icon on the toolbar.

8



ADD A VIGNETTE

Click and drag the guide out so you have a large oval, then hover the mouse pointer near the control point on the right side and rotate the guide in line with the leaf on the right. Next, set Exposure to -1.70 and Feather to 30. When you're done, click OK. When you save your image, make sure you save it as a TIFF. (See below.)

Save as a TIFF

The best file format that supports layers is a TIFF

When you're working non-destructively, you'll need to save your image as a file type that supports layers. The two options are TIFFs and PSDs. Photoshop Documents (PSDs) work well in many situations, but there are two simple

reasons why TIFFs are better. First, PSDs can have backwards compatibility issues with older versions of Photoshop, even with Maximize Compatibility ticked when saving.

Second, they don't support Smart Filters. So for these reasons alone, using the TIFF file format will allow you to do so much more when you work non-destructively.

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Achieve in-camera atmosphere

Look for ways to add drama as you shoot

This project is all about taking your photos a stage further in post-processing to create a heightened mood. But – apart from a little creative flare – you can only enhance what's already there. So how do you create atmosphere in-camera? Lighting, camera angle and posing are the three big factors.

First the lighting. The sun is behind the model. Diffused through hazy

cloud, it creates a soft edge highlight along her figure and filters through the fabric. Backlighting is often dramatic.

Second, the camera angle. A long focal length of 200mm and a low shooting angle – almost at ground level – helps to create a sense of depth.

Third, the posing. Here a confident subject, the windswept beach and lightweight flowing fabric combine to good effect.

EXPERT
TIP





DRAMATIC SKIES

First, select the subject with the Quick Selection tool, then go to Select And Mask and paint over the hair with the Refine brush to improve the selection for a precise cutout. Click the Create Adjustment Layer icon in the Layers panel and choose Curves, then drag down on the curve line to darken the sky. Make a second Curves layer, then grab the Gradient tool and plot a black-to-white grad to darken the top of the sky.



FLARE EFFECTS

Make four new layers; set the top two to Overlay and the next to Screen. Grab the Brush tool, set Hardness to 15% and paint a white blob on the lowest layer, a slightly larger yellow blob on the next up, a larger orange blob on the next and a larger purple blob on top. Make a layer, fill it with black, right-click and choose Convert To Smart Object and set its Blend mode to Screen. Go to Filter > Render > Lens Flare. Choose 50-300 and position the effect in the corner.



DODGE AND BURN

Press Cmd/Ctrl+Shift+Alt+E to merge a new layer at the top of the stack, then change the Blend mode to Luminosity. Grab the Dodge tool. Set Range to Highlights and Exposure to 7%, then paint to lift the highlights and ridges in the subject. Switch to the Burn tool; set Range to Shadows with Exposure at 7% again. Paint to darken the folds, crevices and shadowy parts of the subject. This helps to add depth and contrast where it matters most.



THE WARM DESATURATED LOOK

You can use a tonal preset to enhance the mood. Click the Create Adjustment Layer icon and choose Color Lookup. Select the Candlelight Cube preset in the 3DLut dropdown. Change the Blend mode of the layer to Color and lower the layer Opacity to about 50%. Next, merge another new layer with Cmd/Ctrl+Shift+Alt+E and go to Filter > Camera Raw Filter to make final tonal tweaks, such as a boost in Clarity, a slight drop in Saturation and a subtle vignette.

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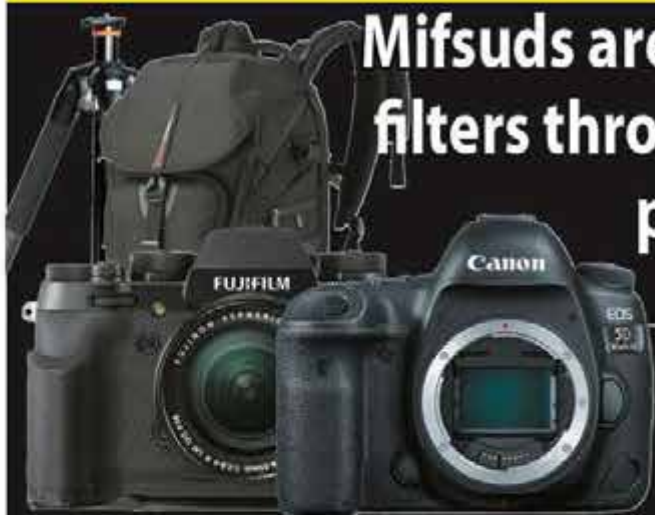
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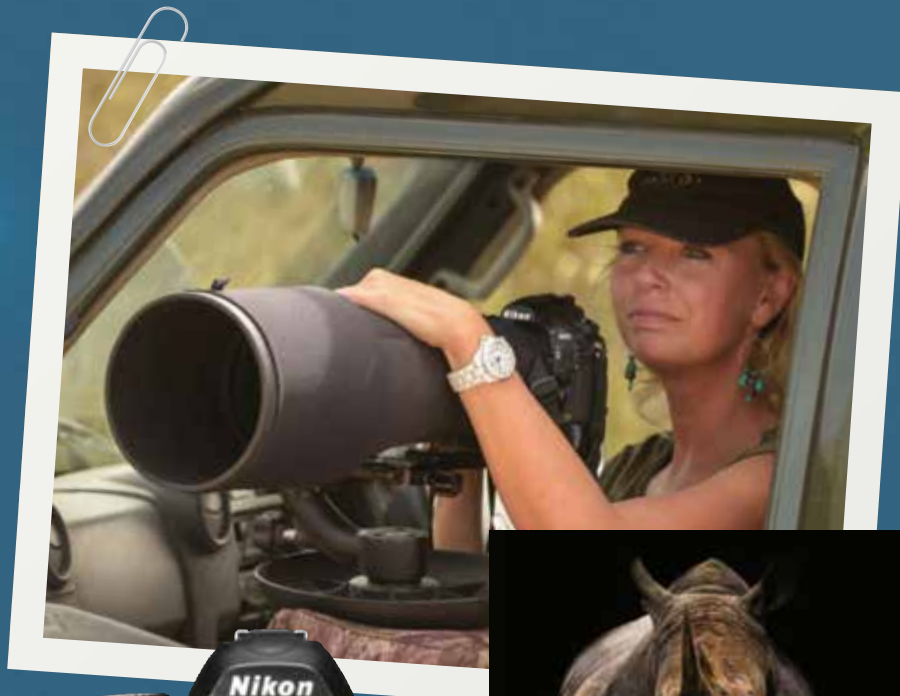
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What's your current mood as we speak?

Excited! Our *Remembering Rhinos* book launch is fast approaching. After nearly a year of work, people will finally be able to get their hands on the book. I can't wait to see their reactions.

What's your favourite place on Earth?

The Masai Mara in Kenya is hard to beat, for both the landscape and the density of the wildlife.

What animal would you be?

A leopard, for sure. I like to disappear off and do my own thing.

Are you a hunter or a gatherer?

I guess a hunter, in the sense that I try and go out and make things happen.

Who's the first photographer who comes to your mind, and why?

Angie Scott. She's my mentor and inspiration – and I don't think anyone takes more beautiful pictures of wildlife than her.

What is your screensaver?

A lion walking straight down the barrel

of the camera towards me. I held my breath when I took that image!

What did you want to be when you were five years old?

A brain surgeon!

What do you want to be when you grow up?

I'm answering "who" for this. Virginia McKenna OBE, co-founder of The Born Free Foundation.

Be honest – what kind of photography are you bad at?

Anything that involves setting up lighting. It isn't something I've done so often that it is second nature.

If you weren't a photographer, what would you have done?

I only became a photographer in my late 30s. Life is a journey, so who knows where I'll end up!

How would you describe your own photography?

Emotional.

What was your first camera?

A Nikon D3000, which I bought as a hasty purchase for my first safari...

What is at the top of your personal bucket list?

Right now, to see gorillas in the wild (but I have a trip to do that booked later this year). I'm very excited.

Which book should every photographer read?

Remembering Rhinos, of course!

Could you live without Photoshop?

I do! I only use Lightroom to process my images.

What would be a good theme song for your life?

'Flying Over Africa' by John Barry.

And finally, what is your Desert Island DSLR?

I have been green with envy over reviews of the Nikon D850, so I guess it would have to be that! One day, hopefully, one day...

Remembering Rhinos is out now. It features images of this endangered animal from the world's leading wildlife photographers, and all proceeds from the book go to The Born Free Foundation.

www.rememberingrhinos.com



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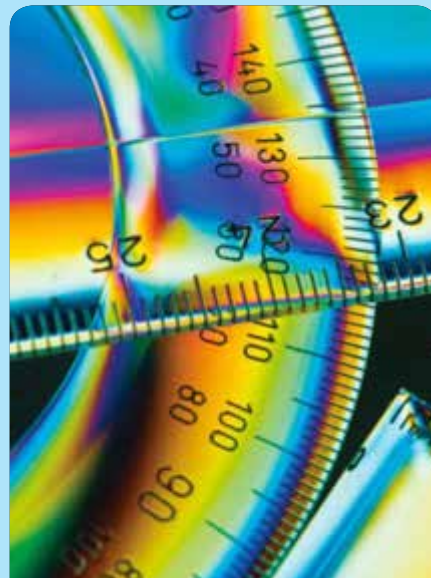
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Digital Camera FIREWORK DISPLAYS



Digital Camera CROSS-POLARISATION

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FOR YOUR FIRST SHOT, TRY...

Exposure mode	Aperture Priority
Aperture	f/5.6
Shutter speed	Set by camera
ISO	400

TO IMPROVE YOUR SHOT...

- Get down low so you're eye-level with your subject and rest the camera on a beanbag.
- Long telephoto lenses create intimate shots. Add a teleconverter to your existing lens to get even closer to small subjects.
- Create visual pathways through the frame, such as foliage on either side of the subject.

TOP TIP: Do some research to find out what your chosen species likes to eat, then entice them in with regular food supplies!

fotoVoyager / Getty Images

Digital
Camera

AUTUMN ABSTRACTS



Autumn is known for vibrant, warm colours and atmospheric sunlight. Explore forests or local parks and look for interesting patterns that are created by the leaves and trees.

- **Try freelensing**
Remove the lens from your camera, hold it close to the sensor and rotate it around to shift the focal plane. A 50mm is the perfect companion for trying out this technique.
- **Aperture Priority**
Put the camera into Aperture Priority mode and select a wide aperture of around f/1.8.
- **Go backlit**
For the most brilliant colours, aim to shoot towards the canopy into a bright sky.
- **Make it pop**
A few enhancements in Camera Raw can make all the difference to your final shots. Boost the Vibrancy levels right up!

Digital
Camera

CROSS-POLARISATION



- **What is cross-polarisation?**
Cross-polarisation turns the invisible stress patterns in pieces of transparent plastic into a visible rainbow pattern. Try it out with plastic cutlery, stationary or ornaments.

- **How do I create the effect?**
Position a polarised light source behind your subject (a laptop monitor is ideal here). Set the desktop to a neutral colour such as grey.

Screw on a polarising filter to your camera lens. Position the item you're shooting in front of the monitor.

Rotate the polarising filter around to get the best effect. When multicoloured patterns appear, you know you've got it right!

TOP TIP: If you have a lightbox, you can turn it into a polarised light source by laying polarising film over the top of it.

Digital
Camera

FIREWORK DISPLAYS



FOR YOUR FIRST SHOT, TRY...

Exposure mode	Manual
Aperture	f/16
Shutter speed	25 sec
ISO	100

STEP BY STEP...

- Use a tripod to keep your camera stable. A remote is handy for firing off the shutter.
- To capture multiple fireworks in the same frame, place a gloved hand in front of your lens after each explosion goes off.
- It's hard to predict where a firework will explode, so use a wide-angle to compose.

TOP TIP: Turn off long-exposure noise reduction. It slows down shooting, and you don't want to miss the spectacle!

William Fawcett / Getty

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